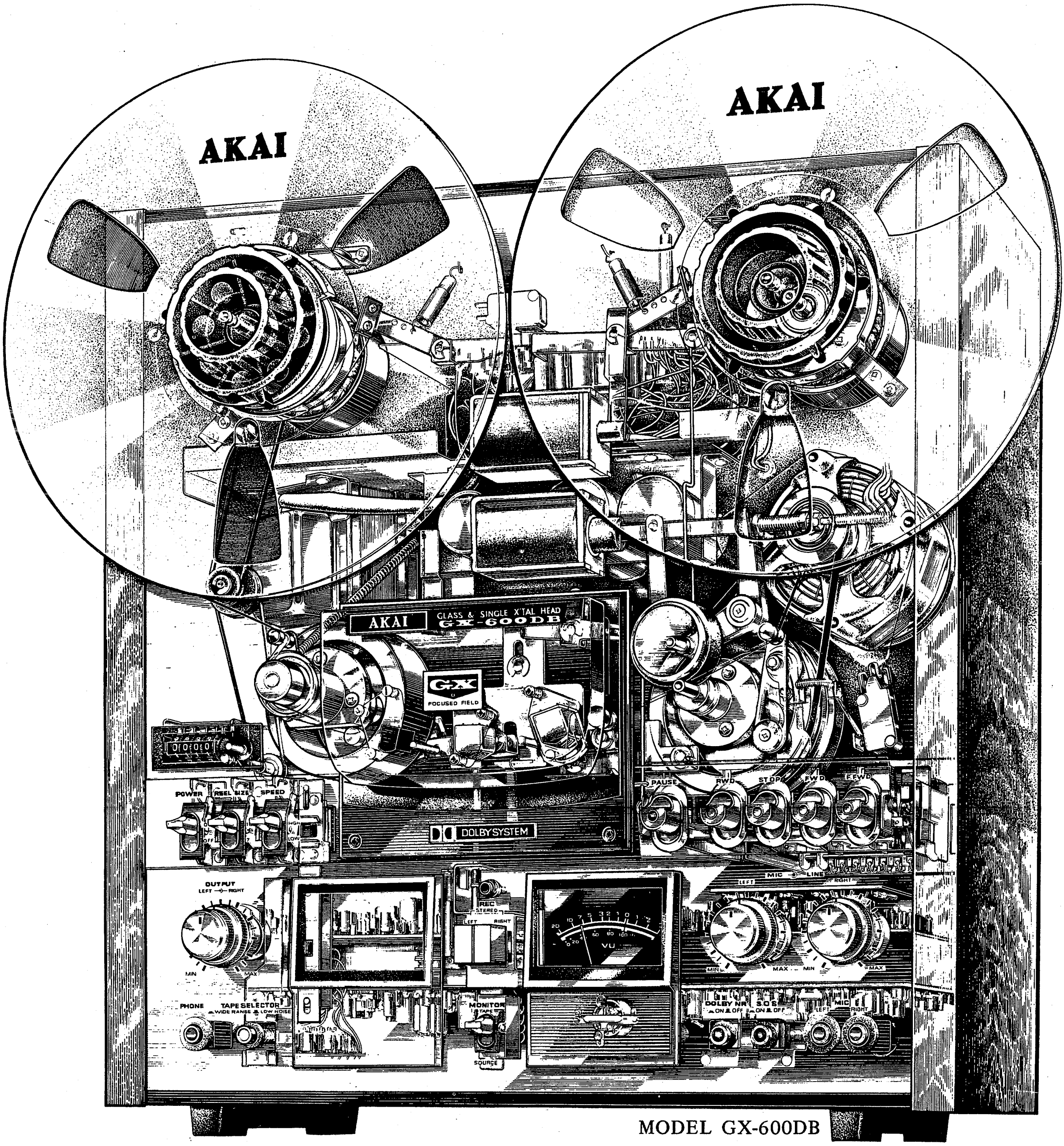
SERVICE MANUAL
PARTS LIST

PRIDE IN QUALITY

AKAI STEREO TAPE DECK

MODEL GX-600D

ALSO APPLICABLE TO MODEL GX-600DB, GX-600D-PRO


AKAI
AKAI
AKAI
GLASS & SINGLE X'TAL HEAD
GX-600DB
GX
FOCUSED FIELD
DOLBY SYSTEM
POWER
REEL SIZE
SPEED
PAUSE
RWD
STOP
FWD
FFWD
OUTPUT
LEFT RIGHT
MIN
MAX
REC
STEREO
LEFT RIGHT
VU
MIC LINE
LEFT RIGHT
PHONE
TAPE SELECTOR
WIDE RANGE LOW NOISE
MONITOR
TAPE
SOURCE
DOLBY NR
S.O.S.
ON OFF
MIC
LEFT RIGHT

MODEL GX-600DB

STEREO TAPE DECK

MODEL GX-600D

ALSO APPLICABLE TO MODEL GX-600DB, GX-600D · PRO
STEREO TAPE DECK

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SECTION 1

SERVICE MANUAL

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I. SPECIFICATIONS

1. MODEL: GX-600D, GX-600DB

An asterisk next to a figure indicates the minimum guaranteed performance.

TRACK SYSTEM		4 track-2 channel stereo, monaural system
TAPE SPEED		7-1/2 ips. (19 cm/sec), 3-3/4 ips (9.5 cm/sec) ±0.8% $(^{*+1\%}_{\ -1.5\%})$
WOW AND FLUTTER		Less than 0.07%(*0.1%) R.M.S. at 7-1/2 ips. Less than 0.10%(*0.17%) R.M.S. at 3-3/4 ips.
TOTAL WOW AND FLUTTER		Less than 0.13% R.M.S. at 7-1/2 ips. Less than 0.2% R.M.S. at 3-3/4 ips. (SCOTCH #150 tape, 3,000 Hz Recording/Playback)
FREQUENCY RESPONSE		30 to 23,000 Hz(*30 to 22,000 Hz)±3 dB at 7-1/2 ips. 30 to 19,000 Hz(*30 to 18,000 Hz)±3 dB at 3-3/4 ips. (SCOTCH #211 tape, low noise position, -20VU recording)
DISTORTION FACTOR		Less than 0.7% at 7-1/2 ips.
TOTAL DISTORTION FACTOR		*Less than 1.5% at 7-1/2 ips. *Less than 2.5% at 3-3/4 ips. (SCOTCH #211 tape, 1,000 Hz "0" VU Recording/Playback)
SIGNAL TO NOISE RATIO		Better than 56 dB(*50 dB)
TOTAL SIGNAL TO NOISE RATIO		*Better than 45 dB
OUTPUTS	LINE OUTPUT	0.775V(0±1 dB) Using a 700 Hz "0" VU pre-recorded tape, output vol. max.
	DIN OUTPUT	0.5V(-4±1 dB)
INPUTS	MIC INPUT	More than 0.3 mV
	LINE INPUT	More than 70 mV
	DIN INPUT	More than 3 mV
RECORDING PLAYBACK LEVEL		0.775V(0±1.5 dB) using a SCOTCH #211 tape
CROSS TALK		Better than 40 dB (stereo) Better than 60 dB (*55 dB) (Monaural) (1,000 Hz+3VU Recording)
ERASE RATIO		Better than 70 dB (1,000 Hz+3VU recording)
RECORDING BIAS FREQUENCY		150±10 kHz
BIAS LEAK		Less than -40VU
HIGH FREQUENCY DEVIATION		Within 3 dB 8,000 Hz 3-3/4 ips. tape at 7-1/2 ips.
RECORDING CAPACITY		180 min 2 channel stereo recording using a 3,600 ft. tape at 7-1/2 ips.
F.FWD AND RWD TIME		170 sec., using a 3,600 ft. tape at 50 Hz
MOTORS	CAPSTAN MOTOR	2 speed hysteresis synchronous motor Type: HM2-16MC(winterized) 4-8 pole Revolutions: 1,500/1,800 r.p.m. at 50/60 Hz 750/900 r.p.m. at 50/60 Hz
	REEL MOTOR	Two 6-pole eddy current outer rotor motors Type: 24XO-TD Revolutions: 930/1,120 r.p.m. at 50/60 Hz
HEADS	ERASE HEAD	Type: E4-260 GAP: W Gap Impedance: 210Ω ± 10% at 100 kHz D.C. Resistance: 2Ω
	RECORDING HEAD	Type: R4-200 Gap: 4 microns Impedance: 1,870Ω at 100 kHz D.C. Resistance: 8Ω
	PLAYBACK HEAD	Type: P4-202 Gap: 1.7±0.5 microns Impedance: 1,400Ω at 1 kHz D.C. Resistance: 268Ω
TRANSISTORS AND F.E.T		2SC458LG(C) . . . 16 2SC1211(D) . . . 2 2SC711(D) (E) . . . 6 2SD360(D) . . . 1 Dolby N.R. Circuit 2SA564(Q) . . . 4 2SC458(C) . . . 12 2SC458LG(C) . . . 12 2SK30A(GR) . . . 4

DIODES	1N34A . . . 2 10D4 . . . 7 1S2473VE . . . 3 10D5 . . . 4 Dolby N.R. Circuit 1N34A . . . 8 1S2473VE . . . 12
ZENER DIODES	WZ240 . . . 1 Dolby N.R. Circuit WZ085 . . . 4
POWER SUPPLY	100 to 240V A.C. 50/60 Hz universal models 120V A.C. 60 Hz U/L models 220V A.C. 50 Hz CEE models 100V A.C. 50/60 Hz JPN models
POWER CONSUMPTION	130W/50 Hz, 100W/60 Hz
DIMENSIONS	443(W) x 475(H) x 228(D)mm (17.4" x 18.7" x 9")
WEIGHT	GX-600D: 22.0 kg(48.4 lbs.) GX-600DB: 22.3 kg(49.0 lbs.)

NOTE: Specifications subject to change without notice.

2. MODEL: GX-600D · PRO

An asterisk next to a figure indicates the minimum guaranteed performance.

TRACK SYSTEM		2 track-2 channel stereo, monaural system
TAPE SPEED		15 ips. (38 cm/sec.), 7-1/2 ips. (19 cm/sec.) ±0.8% $(*^{+1\%}_{-1.5\%})$
WOW AND FLUTTER		Less than 0.05%(*0.07%) R.M.S. at 15 ips. Less than 0.07%(*0.12%) R.M.S. at 7-1/2 ips.
TOTAL WOW AND FLUTTER		Less than 0.1% R.M.S. at 15 ips. Less than 0.15% R.M.S. at 7-1/2 ips. (SCOTCH #150 tape, 3,000 Hz Recording/Playback)
FREQUENCY RESPONSE		30 to 25,000 Hz(*30 to 24,000 Hz)±3 dB at 15 ips. 30 to 23,000 Hz(*30 to 22,000 Hz)±3 dB at 7-1/2 ips. (SCOTCH #211 tape, low noise position, -20VU recording)
DISTORTION FACTOR		Less than 0.7%
TOTAL DISTORTION FACTOR		Less than 1.5% (SCOTCH #211 tape, 1,000 Hz "0" VU Recording/Playback)
SIGNAL TO NOISE RATIO		Better than 59 dB(*50 dB)
TOTAL SIGNAL TO NOISE RATIO		Better than 45 dB
OUTPUTS	LINE OUTPUT	0.775V(0±1 dB) Using a 700 Hz "0" VU pre-recorded tape, output vol., max
	DIN OUTPUT	0.5V(-4±1 dB)
INPUTS	MIC INPUT	More than 0.3 mV
	LINE INPUT	More than 70 mV
	DIN INPUT	More than 3 mV
RECORDING PLAYBACK LEVEL		0.775V(0±1.5 dB) using a SCOTCH #211 tape.
CROSS TALK		Better than 40 dB(stereo) Better than 60 dB(*55 dB) (monaural) (1,000 Hz+3 VU recording)
ERASE RATIO		Better than 70 dB(1,000 Hz+3VU recording)
RECORDING BIAS FREQUENCY		150±10 kHz
BIAS LEAK		Less than -40VU
HIGH FREQUENCY DEVIATION		Within 3 dB 8,000 Hz 3-3/4 ips. tape at 7-1/2 ips.
RECORDING CAPACITY		45 min 2 channel stereo recording using a 3,600 ft. tape at 15 ips.
F.FWD AND RWD TIME		170 sec., using a 3,600 ft. tape at 50 Hz
MOTORS	CAPSTAN MOTOR	2 speed hysteresis synchronous motor Type: HM2-16MC (winterized) 4-8 pole Revolutions: 1,500/1,800 r.p.m. at 50/60 Hz 750/900 r.p.m. at 50/60 Hz
	REEL MOTOR	Two 6-pole eddy current outer rotor motors Type: 24XO-TD Revolutions: 930/1,120 r.p.m. at 50/60 Hz

HEADS	ERASE HEAD	Type: E2-100	
		Gap: W Gap	
		Impedance: 280Ω at 100 kHz	
		D.C. Resistance: 2.5Ω	
	RECORDING HEAD	Type: R2-100	
		Gap: 4.5±1 microns	
		Impedance: 3 kΩ±20% at 100 kHz	
		D.C. Resistance: 8Ω	
	PLAYBACK HEAD	Type: P2-100	
		Gap: 0.5 to 1 microns	
		Impedance: 1.9 kΩ±20% at 1 kHz	
		D.C. Resistance: 180Ω	
TRANSISTORS		2SC458LG(C) . . . 6	2SC1211(D) . . . 2
		2SC711(D) (E) . . . 6	2SD360(D) . . . 1
DIODES		1N34A . . . 2	10D4 . . . 7
		1S2473VE . . . 3	10D5 . . . 4
ZENER DIODE		WZ240 . . . 1	
POWER SUPPLY		100 to 240V A.C. 50/60 Hz universal models	
		120V A.C. 60Hz U/L models	
		220V A.C. 50Hz CEE models	
		100V A.C. 50/60 Hz JPN models	
POWER CONSUMPTION		130W/50Hz, 100W/60 Hz	
DIMENSIONS		443(W) x 475(H) x 228(D) mm	
		(17.4" x 18.7" x 9")	
WEIGHT		22.0 kg (48.4 lbs.)	

NOTE: Specifications subject to change without notice

II. MEASURING METHOD

1. TAPE SPEED DEVIATION

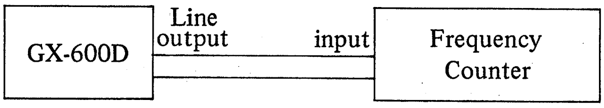

GX-600D
Line output
input
Frequency Counter

Fig. 1

As shown in Fig. 1, connect a Frequency Counter to the Line output of Model GX-600D. Playback a 1,000 Hz pre-recorded test tape. Take a Frequency Counter reading at the beginning, middle, and end of tape winding during playback. The maximum value of these respective readings will represent tape speed deviation.

2. WOW AND FLUTTER

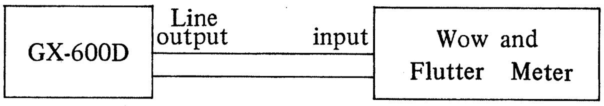

GX-600D
Line output
input
Wow and Flutter Meter

Fig. 2

METHOD A
As shown in Fig. 2, connect the Line output of Model GX-600D to the input of a Wow and Flutter Meter. Playback a 3,000 Hz pre-recorded test tape and take a Wow and Flutter Meter reading at the beginning, middle, and end of tape winding. The maximum value of these respective readings will represent the Wow and Flutter.

METHOD B
Supply a 3,000 Hz sine wave signal from an Audio Frequency Oscillator and make a recording on a blank tape at the beginning, middle, and end of tape winding. Rewind and playback the resultant signal. Measure Wow and Flutter with a Wow and Flutter Meter. (The Wow and Flutter value of Method B will be close to $\sqrt{2}$ times of value of Method A.)

3. FREQUENCY RESPONSE

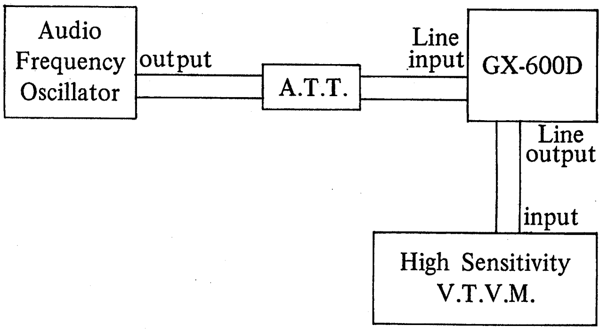

Audio Frequency Oscillator
output
A.T.T.
Line input
GX-600D
Line output
input
High Sensitivity V.T.V.M.

Fig. 3

For measuring Frequency Response, connect instruments as shown in Fig. 3 and proceed as follows:

1) Supply a 1,000 Hz sine wave signal to the Line input of Model GX-600D from an Audio Frequency Oscillator through an Attenuator.
2) Set recorder to recording mode and turn recording level control volume to maximum. Adjust Attenuator to obtain a 0 dB V.T.V.M. reading.
3) Under conditions described in 2) above, readjust Attenuator so that the Line output is -20 dB, and record 30 to 27,000 Hz spot frequencies.
4) Rewind tape and playback from the beginning. Take V.T.V.M. spot frequency readings and plot values on a graph.

NOTE: When measuring Frequency Response, new tape should be used.

4. SIGNAL TO NOISE RATIO

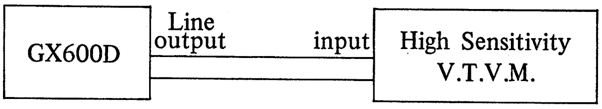

GX600D
Line output
input
High Sensitivity V.T.V.M.

Fig. 4

As shown in Fig. 4, connect a High Sensitivity V.T.V.M. to the Line output of Model GX-600D. Playback a 700 Hz "0" VU pre-recorded test tape and measure the output. Then remove the tape and measure the noise level under the same condition. Convert each of the measured values into decibels.

5. TOTAL HARMONIC DISTORTION

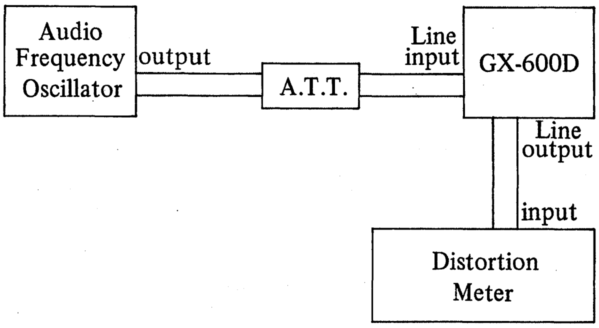


Fig. 5

Connect the measuring instruments as shown in Fig. 5 and record a 1,000 Hz sine wave signal at "0" VU. Playback the resultant signal and measure the overall distortion factor.

NOTE 1) At this time, Distortion of the Audio Frequency Oscillator for must be sufficiently small.

2) When measuring the distortion factor, new tape should be used.

6. CROSS TALK (Cross talk between the tracks)

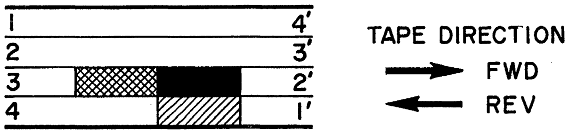


Fig. 6

As shown in Fig. 6, first record a 1,000 Hz sine wave signal on track No. 3 at +3 VU level. Next, record under a non-input condition. Then playback the tape on track No. 3 and 1 (reversed condition of tape) through the B.P.F. (1,000 Hz Band Pass Filter, sensitivity 1,000 Hz, ratio 1:1) and obtain the ratio from the following formula.

$$C = 20 \log \frac{E_0}{E_2 - E_1} \quad \text{(dB)}$$

where, C = Desired cross talk ratio (dB)
E_0 = 1,000 Hz signal output level (V) ■
E_2 = 1,000 Hz cross talk level (V) ▨
E_1 = Non-input cross talk level (V) ▒

7. ERASE RATIO

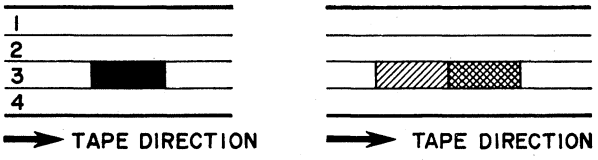


Fig. 7

As shown in Fig. 7, using a virgin tape first record a 1,000 Hz sine wave signal on track No. 3 at +3VU level, then playback this recorded signal and take a V.T.V.M. reading at the output level. Next, erase this recorded portion and playback the erased part through the B.P.F. (1,000 Hz sensitivity 1:1) and take readings of the erased signal. Obtain a ratio between the two from the following formula:

$$Er = 20 \log \frac{E_0}{E_2 - E_1} \quad \text{(dB)}$$

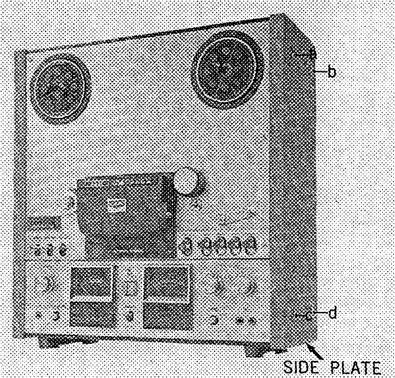
where,
Er = Desired erase ratio
E_0 = 1,000 Hz signal output level (V) ■
E_2 = Erased 1,000 Hz signal and noise level (V) ▨
E_1 = Erased noise level (V) ▒

NOTE: When measuring cross talk and erase ratio, virgin tape should be used.

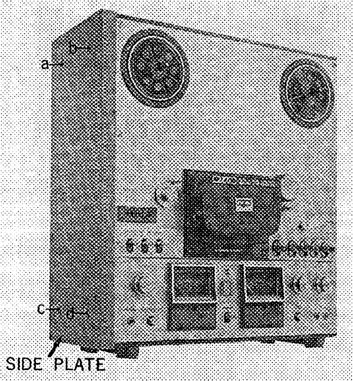
III. DISMANTLING OF UNIT

In case of trouble, etc. necessitating disassembly, please disassemble in the order shown in photographs. Reassemble in reverse order.

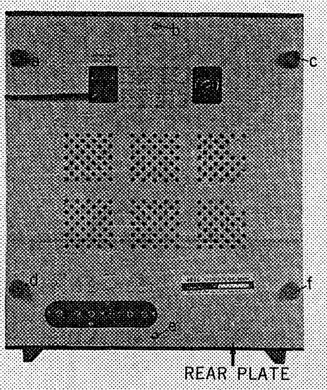
1


a
b
c
d
SIDE PLATE

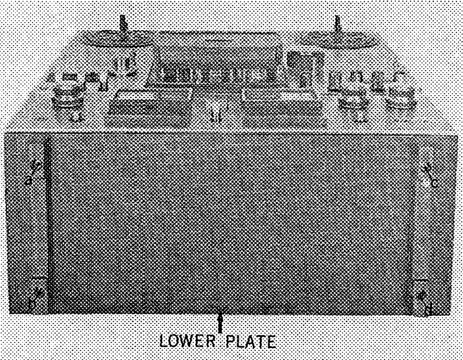
2


b
a
c
d
SIDE PLATE

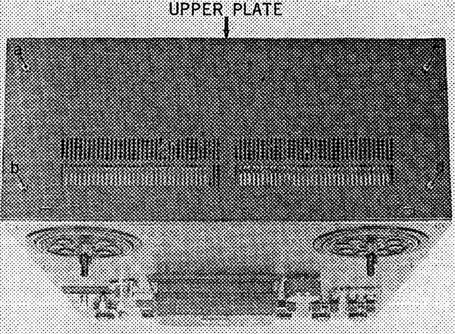
3


b
c
d
e
f
REAR PLATE

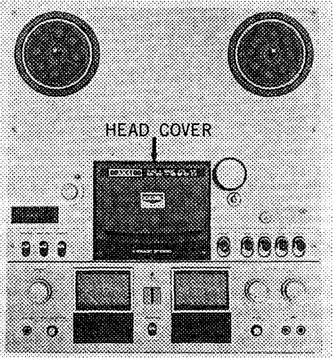
4


a
b
c
d
LOWER PLATE

5


UPPER PLATE
a
b

6



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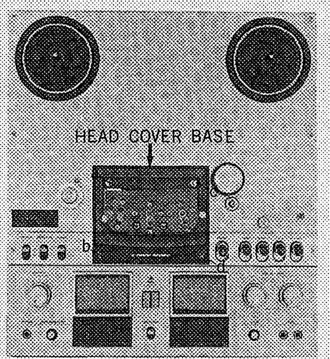
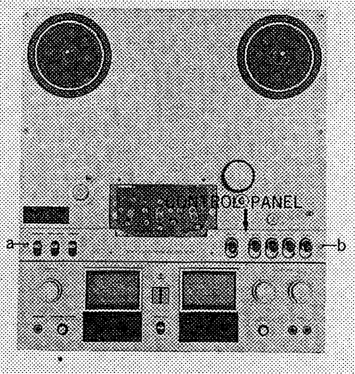
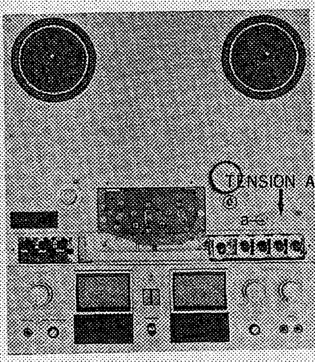

HEAD COVER BASE
b
d

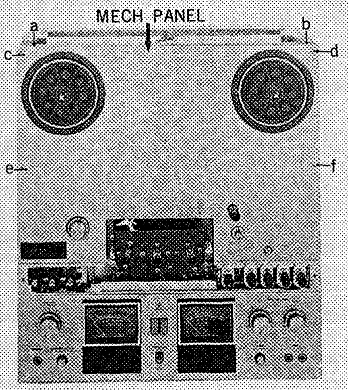
8


CONTROL PANEL
a
b

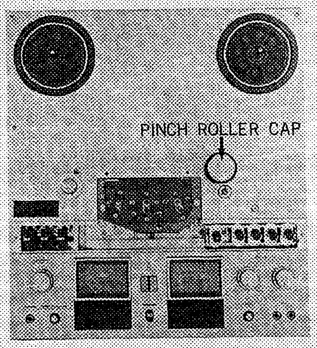
9


TENSION ARM
a

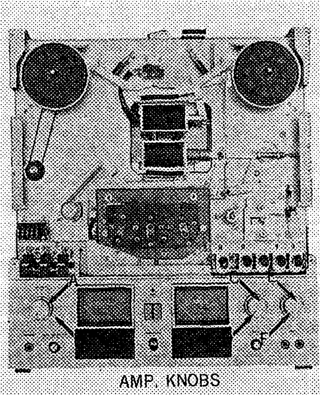
13


MECH PANEL
a
b
c
d
e
f

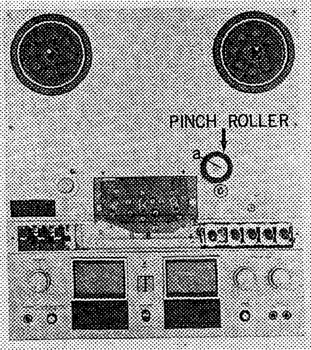
10


PINCH ROLLER CAP

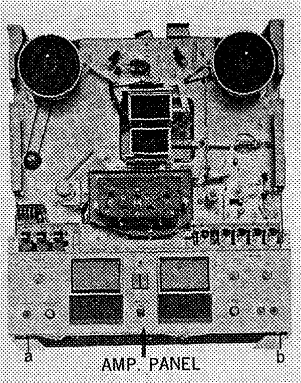
14



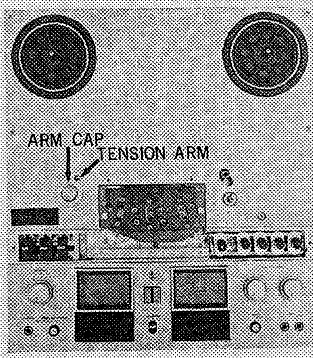
11


PINCH ROLLER
a

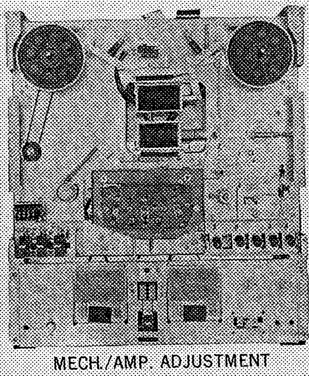
15


a
AMP. PANEL
b

12


ARM CAP
TENSION ARM

16


MECH./AMP. ADJUSTMENT

IV. MECHANICAL SYSTEM ADJUSTMENT

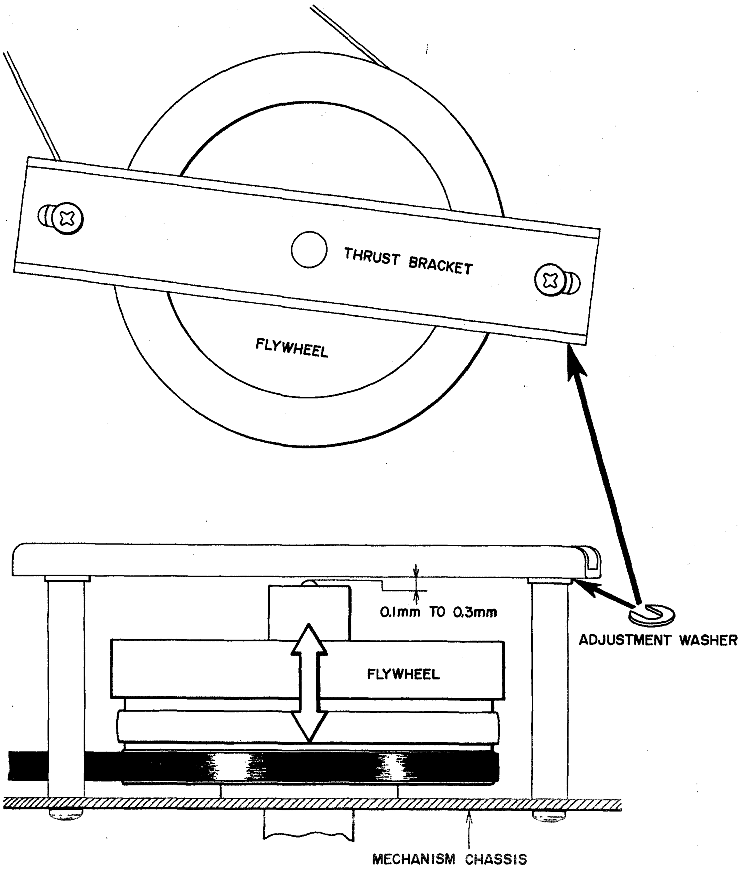

THRUST BRACKET
FLYWHEEL
0.1mm TO 0.3mm
ADJUSTMENT WASHER
FLYWHEEL
MECHANISM CHASSIS

Fig. 8

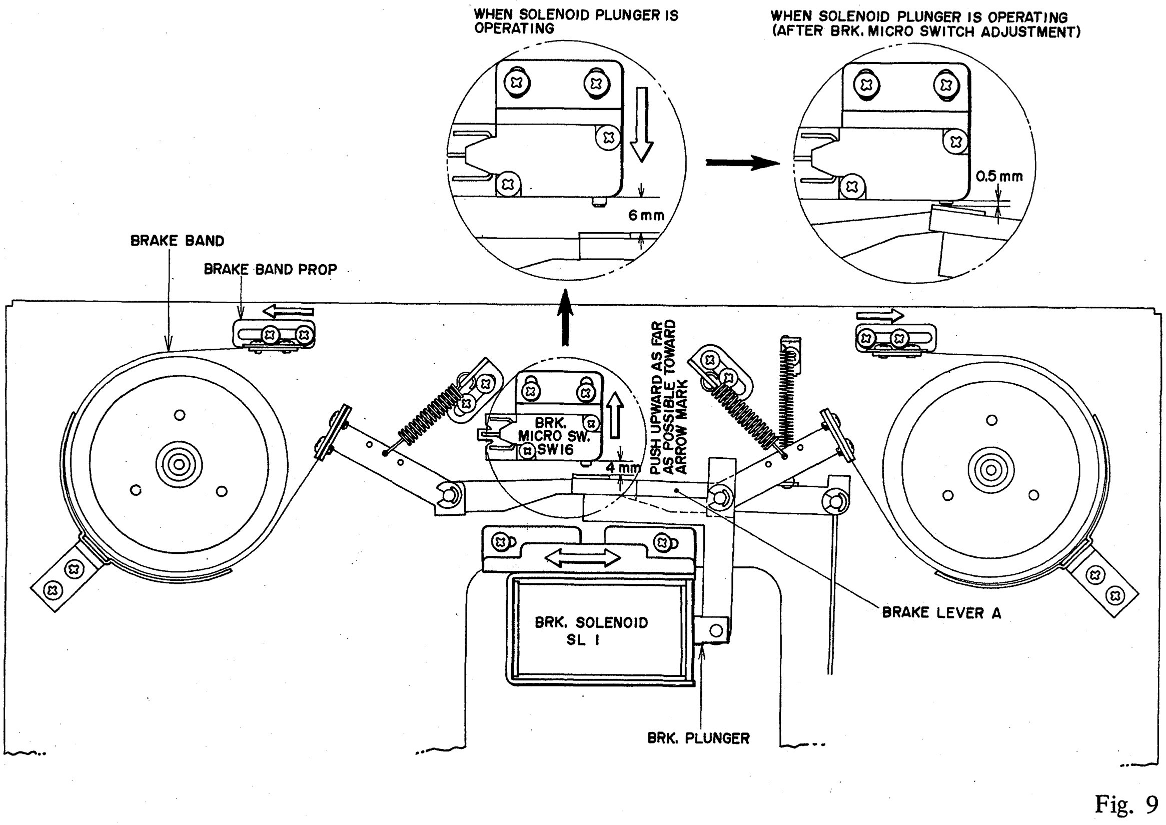

WHEN SOLENOID PLUNGER IS OPERATING
WHEN SOLENOID PLUNGER IS OPERATING (AFTER BRK. MICRO SWITCH ADJUSTMENT)
6 mm
0.5 mm
BRAKE BAND
BRAKE BAND PROP
BRK. MICRO SW. SW16
4 mm
PUSH UPWARD AS FAR AS POSSIBLE TOWARD ARROW MARK
BRAKE LEVER A
BRK. SOLENOID SL 1
BRK. PLUNGER

Fig. 9

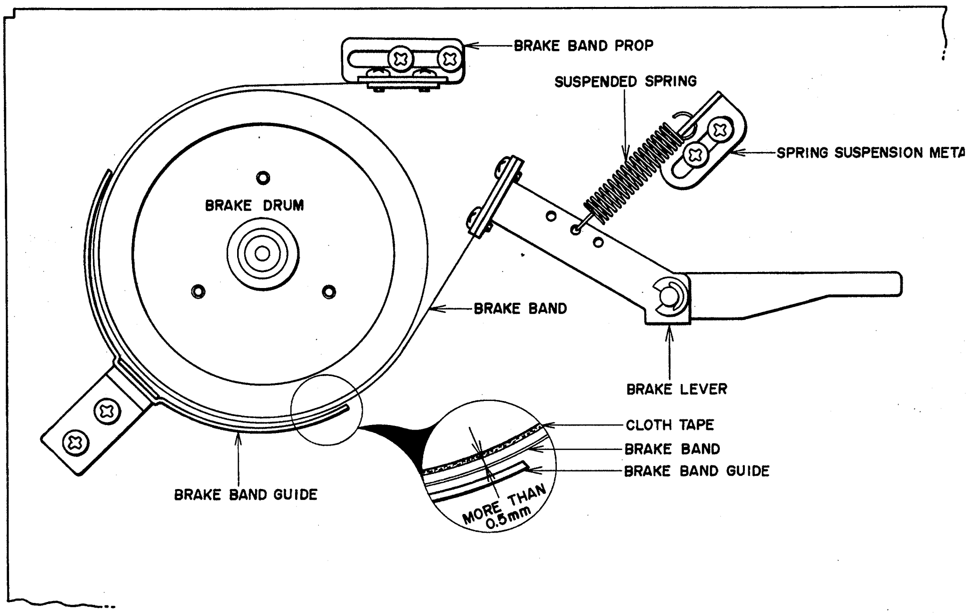

BRAKE BAND PROP
SUSPENDED SPRING
SPRING SUSPENSION META
BRAKE DRUM
BRAKE BAND
BRAKE LEVER
CLOTH TAPE
BRAKE BAND
BRAKE BAND GUIDE
BRAKE BAND GUIDE
MORE THAN 0.5mm

Fig. 10

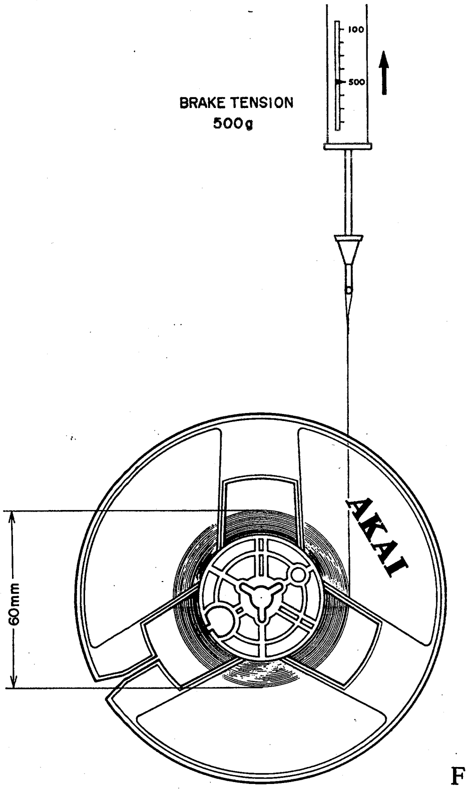

100
500
BRAKE TENSION
500g
60mm
AKAI

Fig. 11

1. FLYWHEEL LOOSE PLAY ADJUSTMENT

Adjust to obtain 0.1 to 0.3 mm loose play by the insertion of a horse shoe shaped washer as shown in Fig. 8.

2. BRAKE SOLENOID POSITION ADJUSTMENT (Refer to Fig. 9)

1) As shown in Fig. 9, push the Brake Micro as far as it will go toward the mechanical chassis and fix at that position.
2) Adjust brake band prop.
   Right hand brake band prop —> fully to the right.
   Left hand brake band prop —> fully to the left.
3) At the condition wherein the brake plunger has fully entered the solenoid, move the solenoid to left and right and fix the solenoid at place at which there is a 4 mm gap between brake lever A and the body of the brake micro switch.
4) At stop mode, lower brake micro switch and fix at position at which the space between brake lever A and the body of the brake micro switch is 6 mm.

NOTE: At playback mode (when the plunger operates), confirm that when brake lever A pushes the brake micro switch, it does not hit the body of the micro switch (Space between body of micro switch and brake lever A must be 0.5 mm).

3. BRAKE TENSION ADJUSTMENT (Refer to Fig.s 10, 11)

1) As shown in Fig. 11, for brake tension adjustment, use a 60 mm diameter of tape wound on an empty 5" reel, and measure with a spring scale. Correct brake tension is 500 gr.
2) In case brake tension is not within specifications, change the position of the suspended spring and adjust position of spring suspension metal.

NOTE: Left/right brake tension non-conformity must be within 50 gr.
After completing brake tension adjustment, confirm that at each mode (except stop mode), the brake band completely separates from the cloth tape on the brake drum. (free condition).

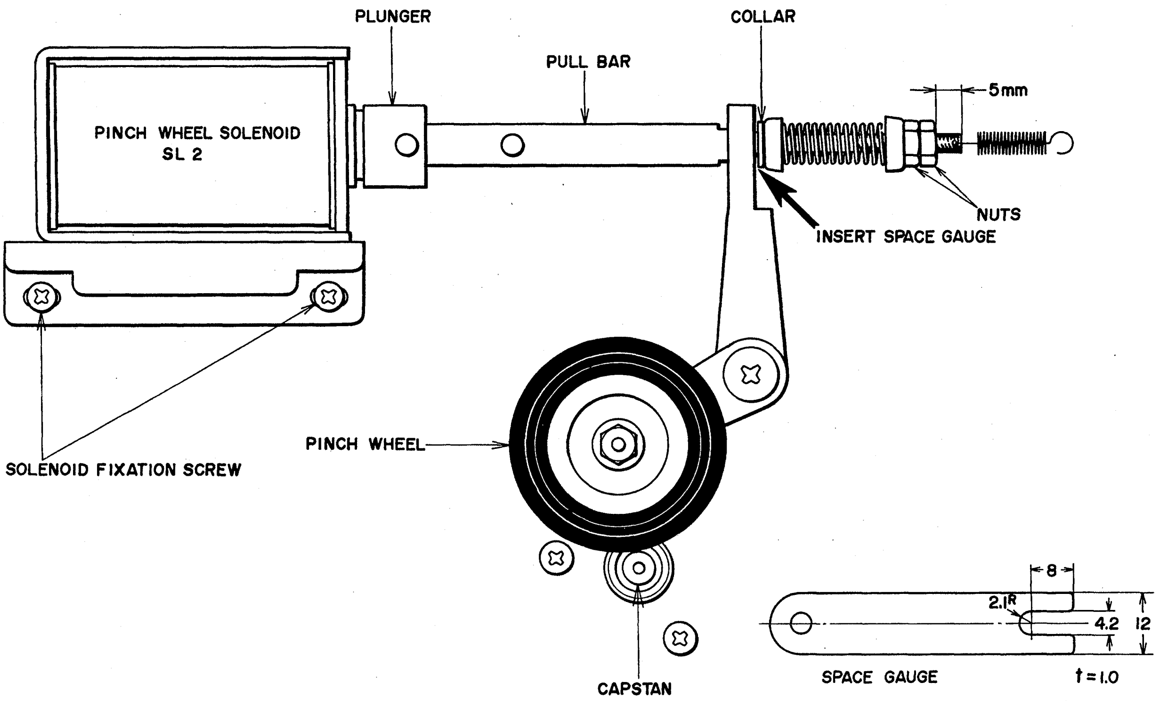

PLUNGER
COLLAR
PULL BAR
5mm
PINCH WHEEL SOLENOID
SL 2
NUTS
INSERT SPACE GAUGE
PINCH WHEEL
SOLENOID FIXATION SCREW
CAPSTAN
8
2.1R
4.2
12
SPACE GAUGE
t=1.0

Fig. 12

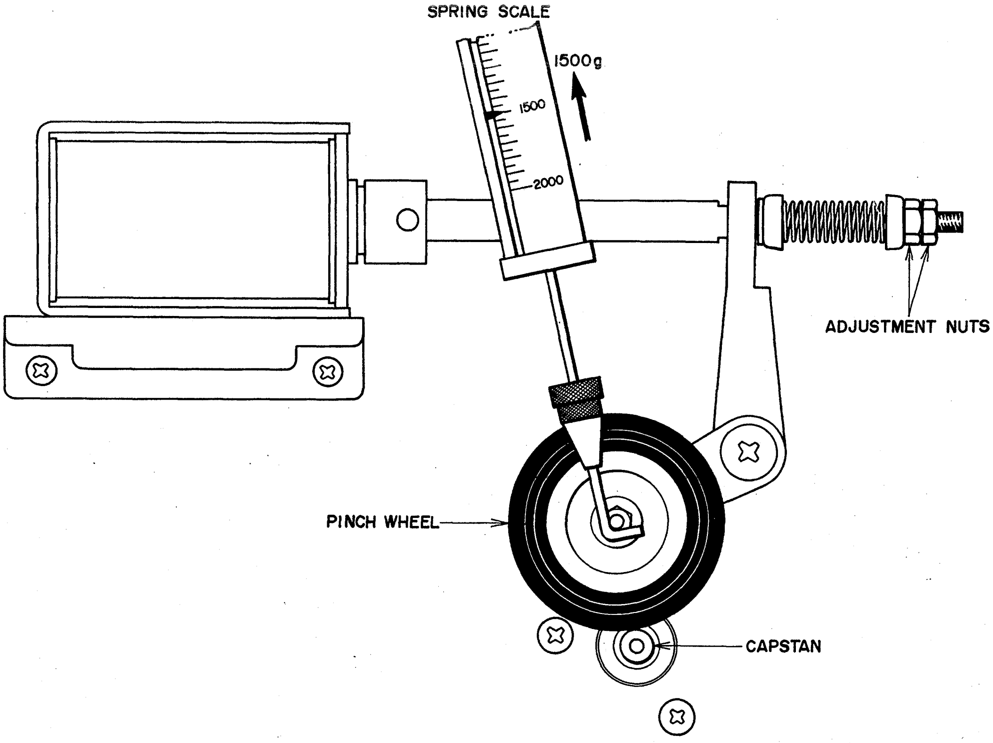

SPRING SCALE
1500g
1500
2000
ADJUSTMENT NUTS
PINCH WHEEL
CAPSTAN

Fig. 13

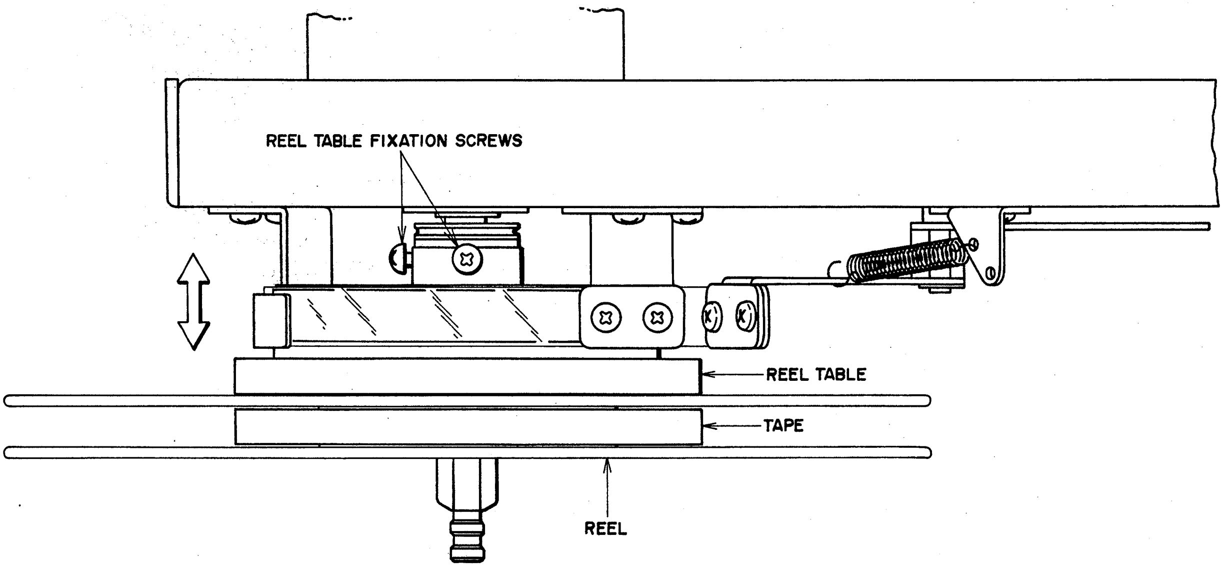


Fig. 14

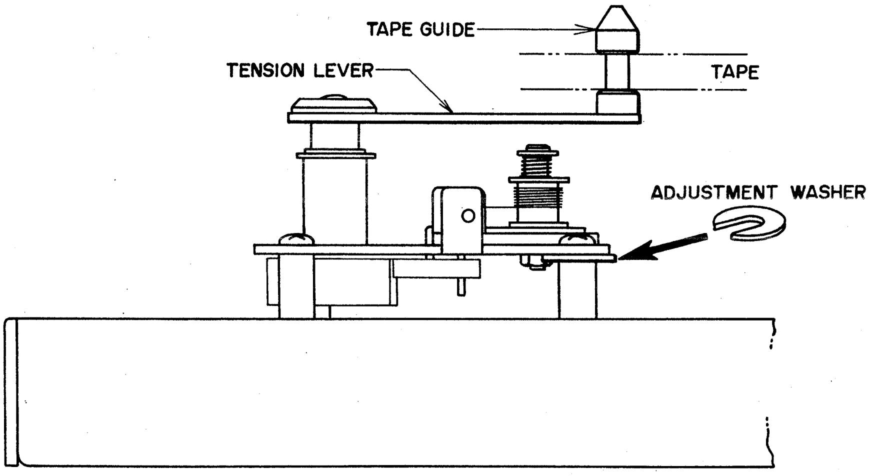


Fig. 15

4. PINCH WHEEL SOLENOID POSITION ADJUSTMENT (Refer to Fig. 12)

1) Set nut so that the screw part of the pull bar protrudes 5 mm from the nut.
2) Insert a space gauge between the collar and pull bar, and fix solenoid at position at which the pinch wheel touches the capstan.

5. PINCH WHEEL PRESSURE ADJUSTMENT (Refer to Fig. 13)

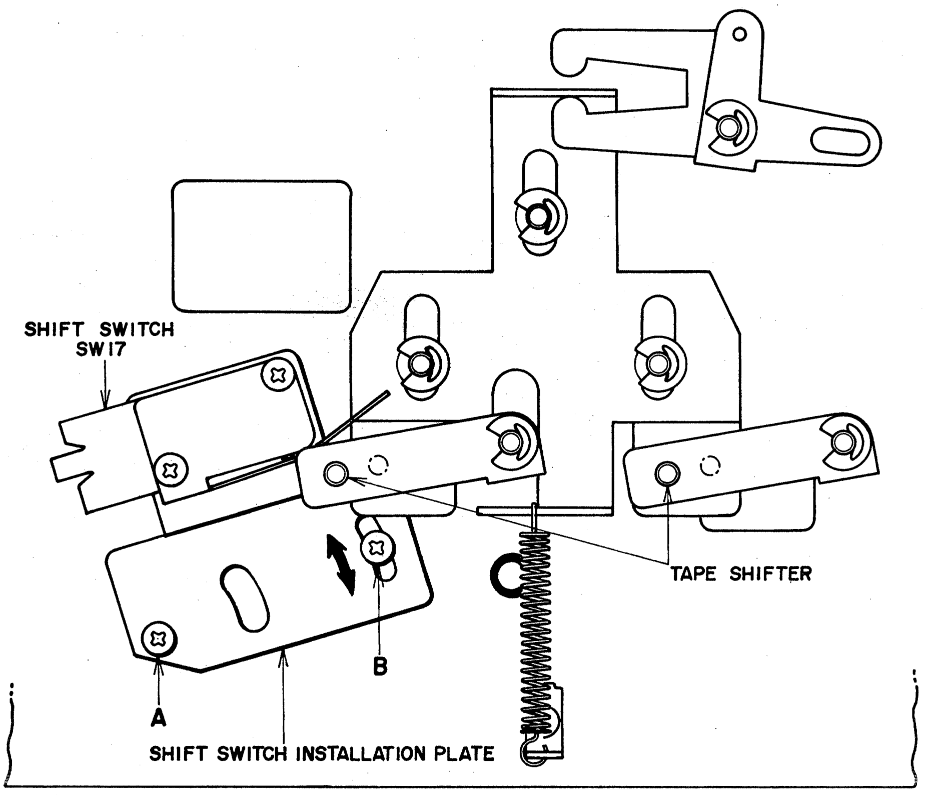
As shown in Fig. 13, pull out and return pinch wheel with a spring scale, reading the spring scale indication when the pinch wheel touches the capstan. Adjust pinch wheel pressure with adjustment nut to obtain a 1.5 kg. spring scale indication at pinch wheel and capstan contact.

6. REEL TABLE HEIGHT ADJUSTMENT (Refer to Fig. 14)

Properly load a tape, and adjust the reel table as indicated by the arrow mark in the figure so that the tape winds in the center of the reel at F.Fwd and Rwd modes. Fix at best position.
Also tape should wind in center of reel regardless of type of reel used.

7. TENSION LEVER HEIGHT ADJUSTMENT (Refer to Fig. 15)

Properly load a tape and set machine to Fwd mode. Adjust tension lever height with a horse-shoe washer so that the tape runs on the center of the tape guide.


SHIFT SWITCH
SW17
TAPE SHIFTER
B
A
SHIFT SWITCH INSTALLATION PLATE

PAUSE MODE

Fig. 16

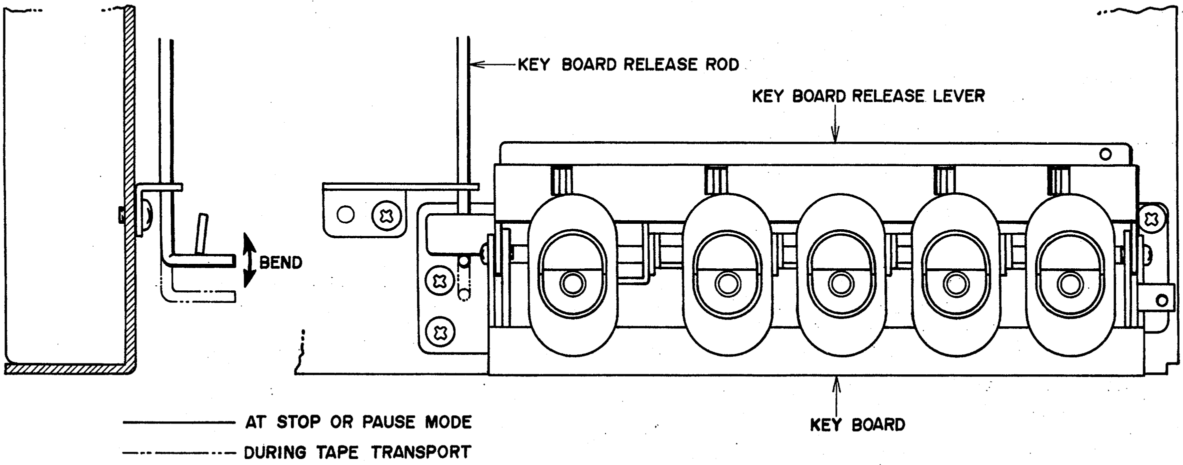

KEY BOARD RELEASE ROD
KEY BOARD RELEASE LEVER
BEND
KEY BOARD
AT STOP OR PAUSE MODE
DURING TAPE TRANSPORT

Fig. 17

8. SHIFT SWITCH POSITION ADJUSTMENT (Refer to Fig. 16)

As shown in Fig. 16, adjust by moving shift switch installation plate as shown by the arrow mark in figure so that when the machine is set to pause mode, the shift switch is not turned off.
(Shift switch installation plate can be moved after loosening screws A, B)

9. KEYBOARD RELEASE ROD ADJUSTMENT (Refer to Fig. 17)

With the power switch turned off, adjust by bending release rod so that the keys do not lock at any mode.

V. HEAD ADJUSTMENT

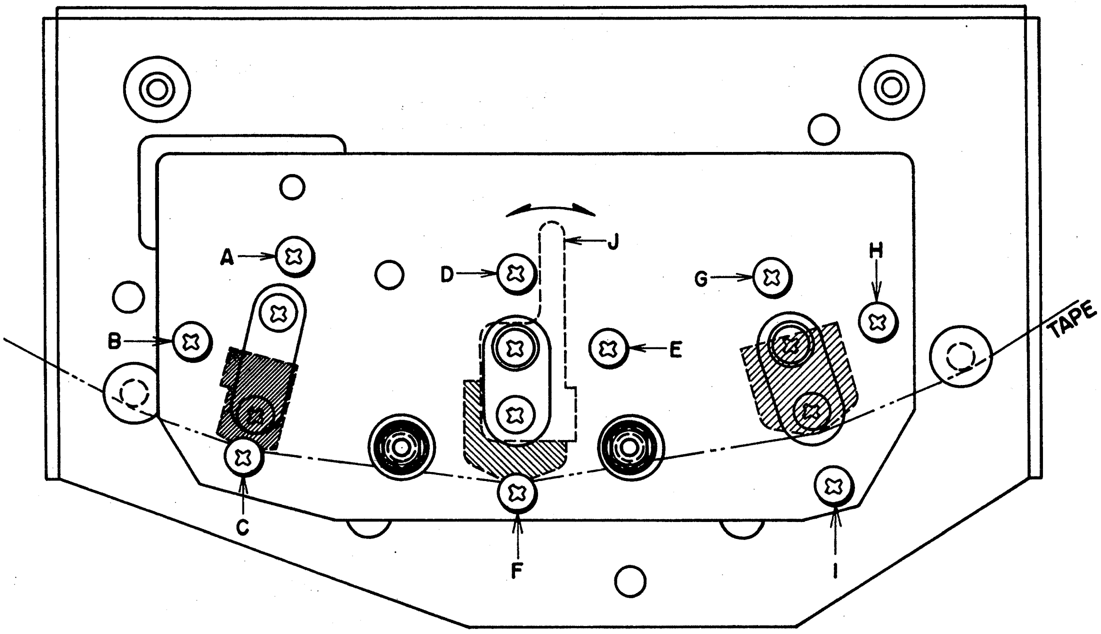

A
B
C
D
E
F
G
H
I
J
TAPE

Fig. 18

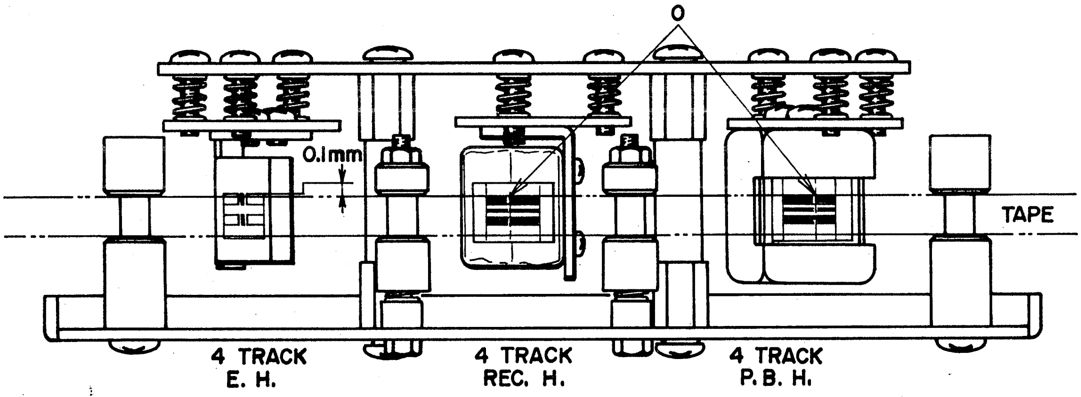

O
0.1mm
TAPE
4 TRACK E. H.
4 TRACK REC. H.
4 TRACK P. B. H.

Fig. 19

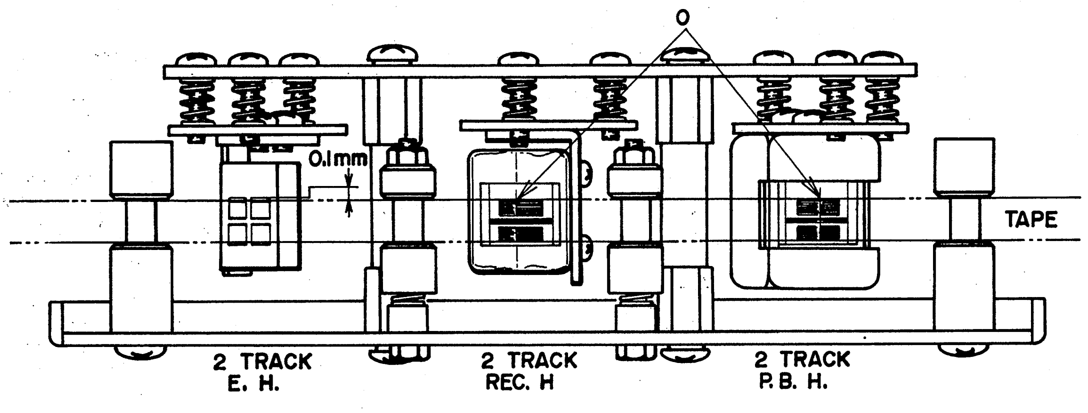

O
0.1mm
TAPE
2 TRACK E. H.
2 TRACK REC. H
2 TRACK P. B. H.

Fig. 20

1. MODELS: GX-600D, GX-600DB

(Refer to Figs. 18, 19)

Adjustment Item	Test Tape, Supply Signal	Measuring Instrument and connection point	Mode	Tape Speed	Adjustment Screw	Remarks
ERASE HEAD HEIGHT	Optional		FWD	Optional	(A)(B)(C)	Upper edge of Ch. 1 head core 0.1 mm higher than upper edge of tape.
RECORDING HEAD HEIGHT	Optional		FWD	Optional	(D)(E)(F)	Upper edge of Ch. 1 head core same height as upper edge of tape
PLAYBACK HEAD HEIGHT	Optional		FWD	Optional	(G)(H) (I)	Upper edge of Ch. 1 head core same height as upper edge of tape
PLAYBACK HEAD AZIMUTH ALIGNMENT	8,000 Hz. 3-3/4 ips.	High Sensitivity V.T.V.M. to Line output	FWD	7-1/2 ips. (19 cm/sec)	(H)	Maximum output on both channels
RECORDING HEAD AZIMUTH ALIGNMENT	15,000 Hz. -20 dBm	Audio Frequency Oscillator to Line input, High Sensitivity V.T.V.M. to Line output	REC	7-1/2 ips. (19 cm/sec)	(E)	Maximum output on both channels.
RECORDING HEAD TAPE CONTACT	15,000 Hz. -20 dBm	Audio Frequency Oscillator to Line input, High Sensitivity V.T.V.M. to Line output	REC	7-1/2 pis. (19 cm/sec)	(J)	No change in output when tension is applied to supply reel side

Chart 1

2. MODEL: GX-600D · PRO

(Refer to Figs. 18, 20)

Adjustment Item	Test Tape, Supply Signal	Measuring Instrument and connection point	Mode	Tape Speed	Adjustment Screw	Remarks
ERASE HEAD HEIGHT	Optional		FWD	Optional	(A)(B)(C)	Protruding Top & Bottom Edges of Head core Equidistant (Tape runs on exact center of Head core)
RECORDING HEAD HEIGHT	Optional		FWD	Optional	(D)(E)(F)	Upper edge of Ch. 1 head core same height as upper edge of tape
PLAYBACK HEAD HEIGHT	Optional		FWD	Optional	(G)(H)(I)	Upper edge of Ch. 1 head core same height as upper edge of tape
PLAYBACK HEAD AZIMUTH ALIGNEMENT	8,000 Hz. 3-3/4 ips.	High Sensitivity V.T.V.M to Line output	FWD	7-1/2 ips. (19 cm/sec)	(H)	Maximum output on both channels
RECORDING HEAD AZIMUTH ALIGNMENT	15,000 Hz. -20 dBm	Audio Frequency Oscillator to Line input, High Sensitivity V.T.V.M. to Line output	REC	7-1/2 ips. (19 cm/sec)	(E)	Maximum output on both channels
RECORDING HEAD TAPE CONTACT	15,000 Hz. -20 dBm	Audio Frequency Oscillator to Line input, High Sensitivity V.T.V.M. to Line output	REC	7-1/2 ips. (19 cm/sec)	(J)	No change in output when tension is applied to supply reel side.

Chart 2

VI. AMPLIFIER SYSTEM ADJUSTMENT

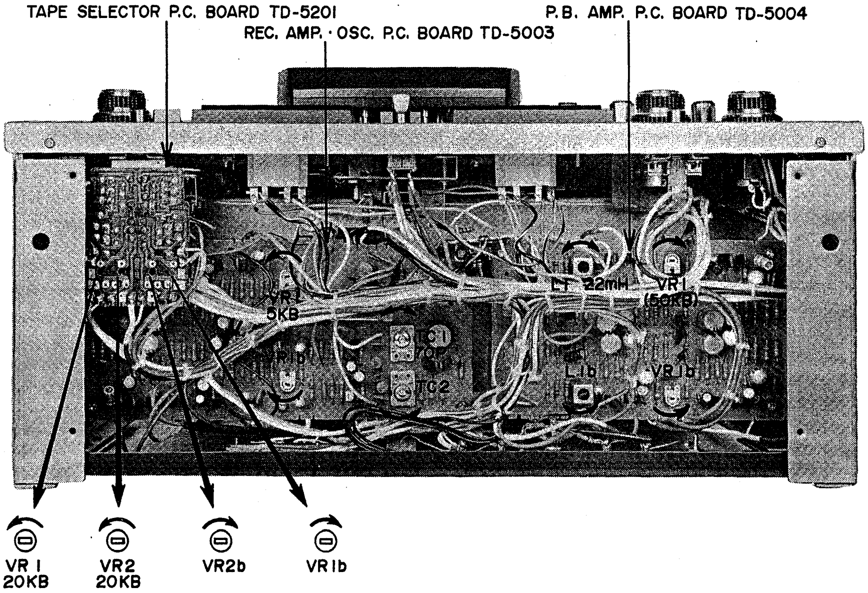

TAPE SELECTOR P.C. BOARD TD-5201
REC. AMP. · OSC. P.C. BOARD TD-5003
P.B. AMP. P.C. BOARD TD-5004
VR1 5KB
L1 22mH
VR1 (50KB)
TC1
TC2
VR1b
L1b
VR1b
VR 1 20KB
VR2 20KB
VR2b
VR1b

Fig. 21

1. PLAYBACK LEVEL ADJUSTMENT

1) Set Speed Selector to 7-1/2 ips. (19 cm/sec)
2) Set Monitor Switch to TAPE position and output volumes to maximum.
3) Playback a 7-1/2 ips. 700 Hz "0" VU recorded test tape.
4) Adjust semi-fixed resistors VR1 50 kB (left ch.) and VR1b 50 kB (right ch.) of P.B. Amp. P.C. Board (Fig. 21) to obtain a 0 dBm ("0"VU) line output level on both channels.

2. HIGH RANGE DEVIATION CHECK

Check to confirm that the difference in output level between left and right channel is within 3 dB when a 3-3/4 ips. 8,000 Hz ampex alignment test tape is played back at 7-1/2 ips.
If high range deviation exceeds 3 dB make head azimuth alignment adjustments again.

3. RECORDING LEVEL ADJUSTMENT (Models GX-600D, GX-600D · PRO only)

1) Set Speed Selector to 7-1/2 ips. (19 cm/sec)
2) Set Monitor Switch to TAPE position and output volumes to maximum.
3) Set Tape Selector to LOW NOISE position and load a Scotch #211 blank tape.
4) Set tape deck to recording mode and supply a 1,000 Hz sine wave signal to the line input from an Audio frequency oscillator.
5) Adjust line recording level volumes or input attenuator so that the line output level of both channels is 0 dBm ("0" VU).
6) Set Monitor Switch to SOURCE position.
7) Adjust semi-fixed resistors VR1 5 kB (left ch.) and VR1b 5 kB (right ch.) of Recording Amp. OSC., P.C. Board (Fig. 21) to obtain a 0 dBm ("0" VU) line output level on both channels.

4. RECORDING LEVEL ADJUSTMENT (Model GX-600DB only)

1) Set Speed Selector to 7-1/2 ips. (19 cm/sec)
2) Set Monitor Switch to SOURCE position and set output volumes to maximum.
3) Set Tape Selector to LOW NOISE position and load a Scotch #211 blank tape.
4) Supply a 1,000 Hz sine wave signal to the line input from an Audio frequency oscillator.
5) Adjust line recording level volume or input attenuator to obtain a 0 dBm ("0" VU) line output level on both channels.
6) Set Monitor Switch to TAPE position and set tape deck to recording mode.
7) Adjust semi-fixed resistors VR1 20 kB (left channel) and VR1b 20 kB (right channel) of tape selector P.C. Board (Fig. 21) to obtain a 0 dBm ("0" VU) line output level on both channels.

NOTE:
1) In the case of wide range tape, set Tape Selector to WIDE RANGE position and use AKAI S.R.T. tape and adjust semi-fixed resistors VR2 20 kB (left ch) and VR2b 20 kB (right ch) of tape selector P.C. Board (Fig. 21) in the same way as outlined in article 4.
2) In the case of Model GX-600D or GX-600D · PRO, the recording level adjustment semi-fixed resistors are on the Recording Amp. P.C. Board, and in the case of GX-600DB, the recording level adjustment semi-fixed resistors are on the tape selector P.C. Board.

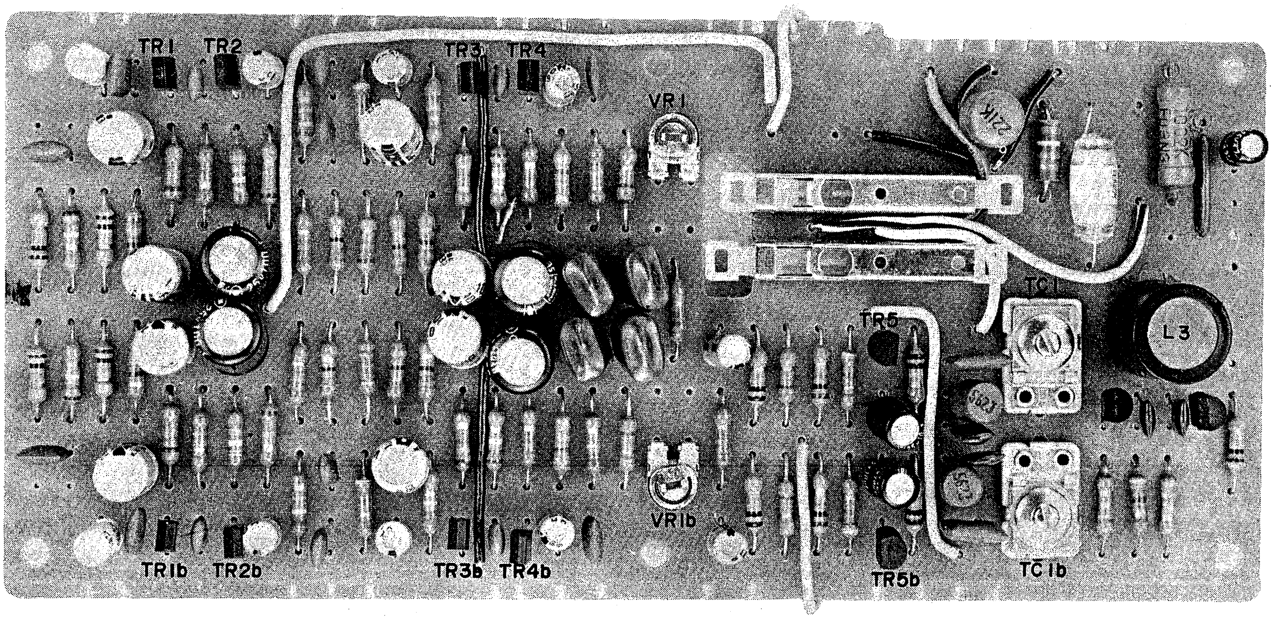

TR1
TR2
TR3
TR4
VR1
TC1
L3
TR5
VR1b
TR1b
TR2b
TR3b
TR4b
TR5b
TC1b

Fig. 22 REC. AMP./OSC. P.C. BOARD TD-5003 (Front Side)

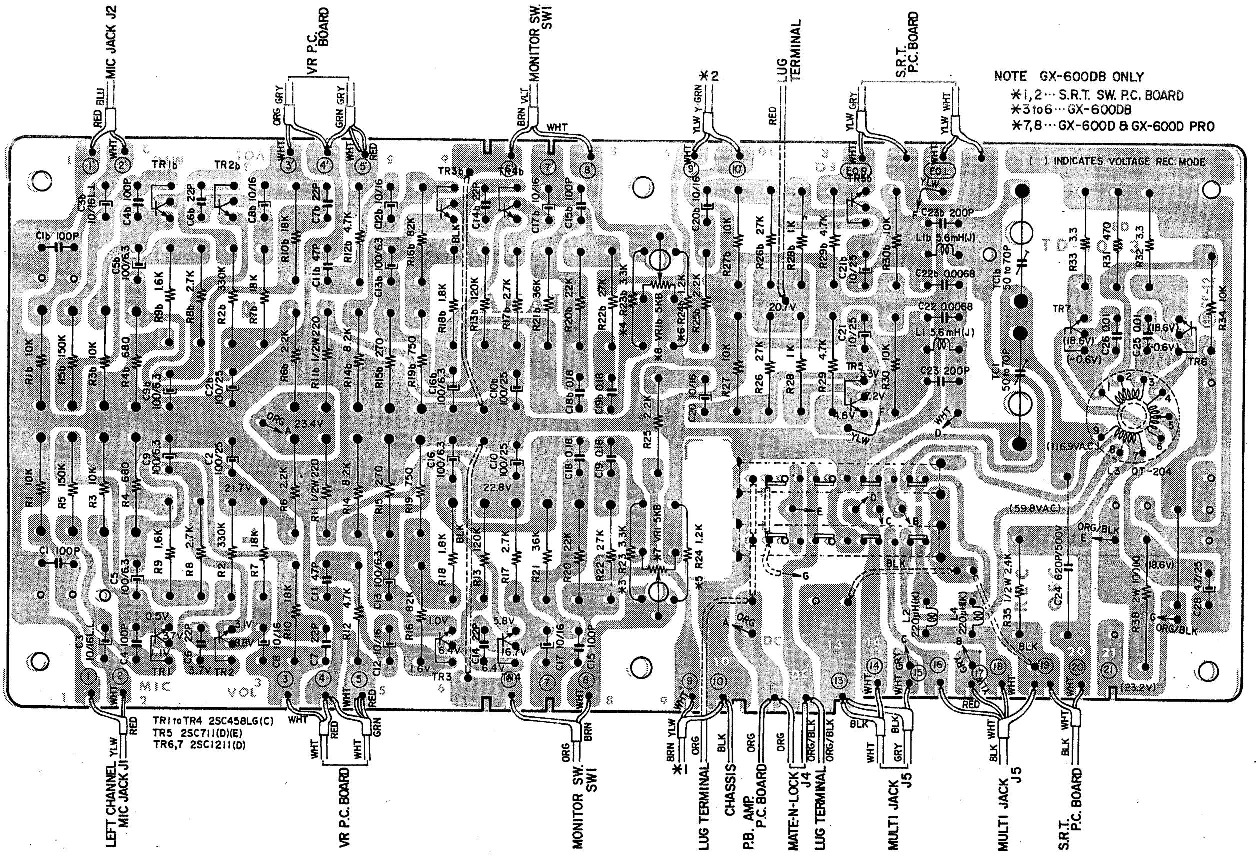

MIC JACK J2
VR P.C. BOARD
MONITOR SW. SW1
✱2
LUG TERMINAL
S.R.T. P.C.BOARD
NOTE GX-600DB ONLY
✱1,2···S.R.T. SW. P.C. BOARD
✱3 to 6···GX-600DB
✱7,8···GX-600D & GX-600D PRO
( ) INDICATES VOLTAGE REC. MODE
TR1 to TR4 2SC458LG(C)
TR5 2SC711(D)(E)
TR6,7 2SC1211(D)
LEFT CHANNEL MIC JACK J1
VR P.C.BOARD
MONITOR SW. SW1
✱1
LUG TERMINAL
CHASSIS
P.B. AMP. P.C.BOARD
MATE-N-LOCK J4
LUG TERMINAL
MULTI JACK J5
MULTI JACK J5
S.R.T. P.C. BOARD

Fig. 23 REC. AMP./OSC. P.C. BOARD TD-5003 (Reverse Side)

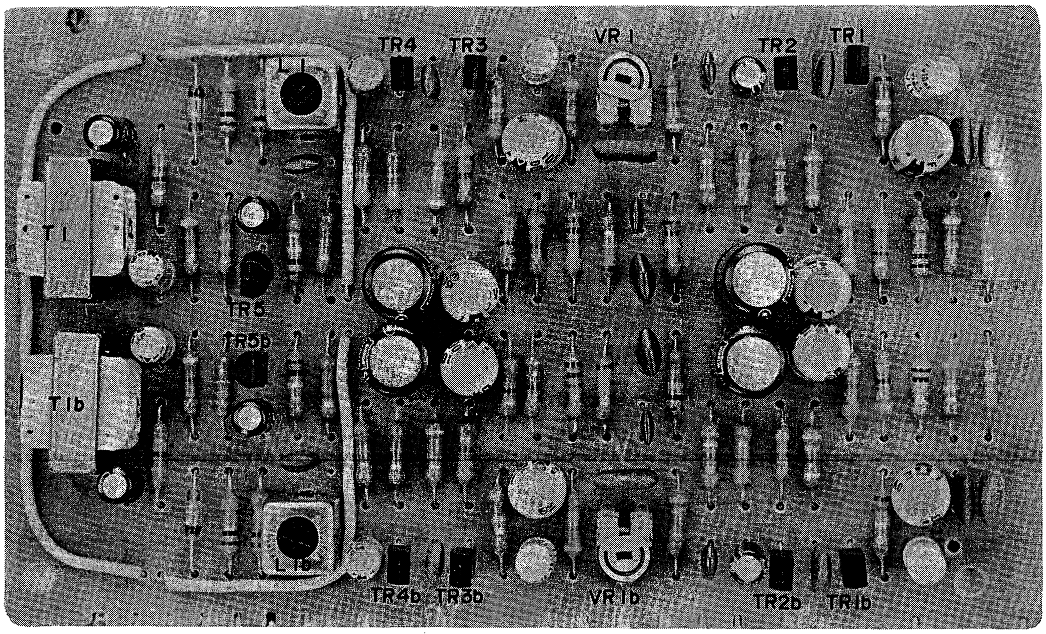
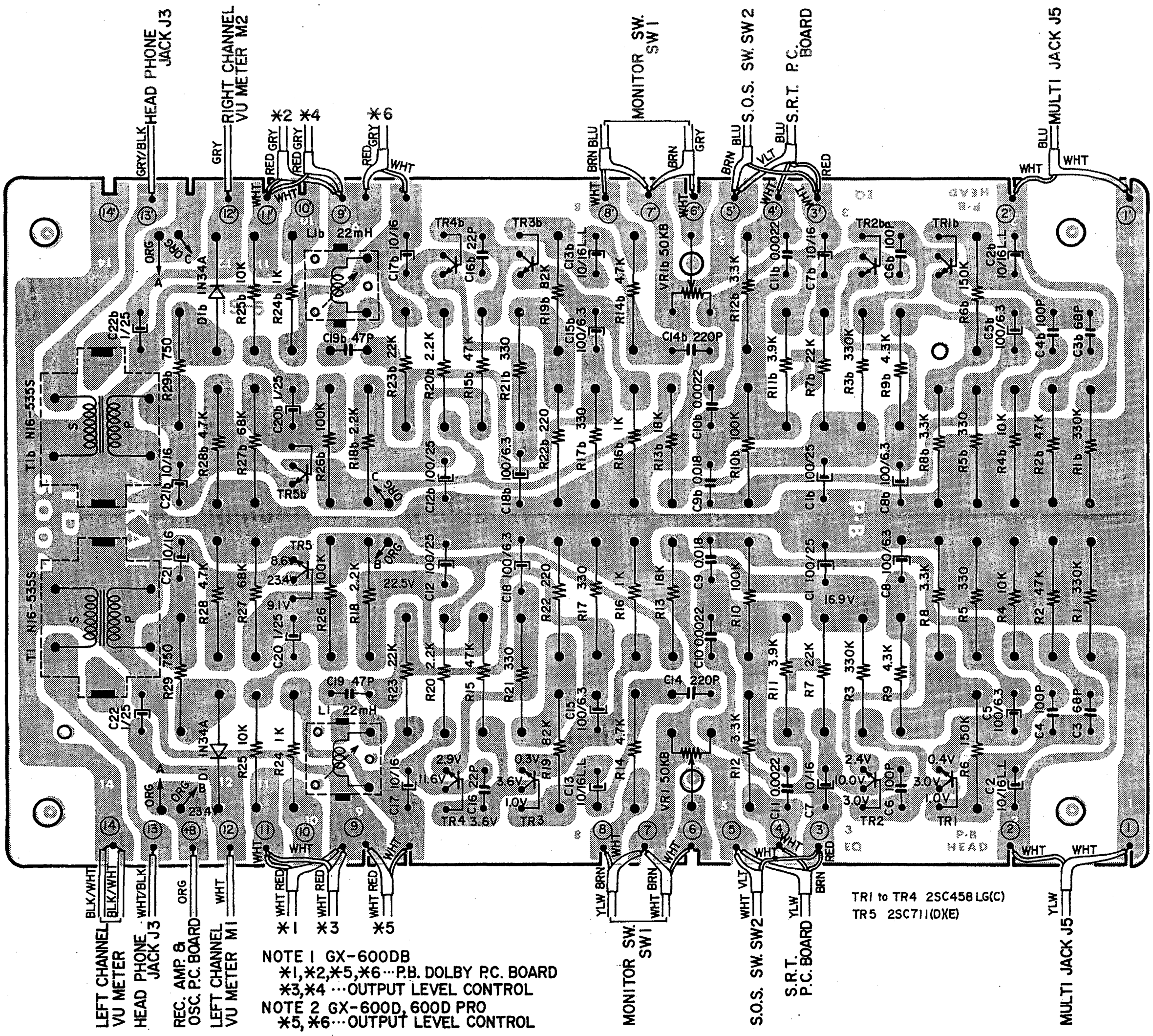

TR4
TR3
VR1
TR2
TR1
L1
T1
TR5
TR5b
T1b
L1b
TR4b
TR3b
VR1b
TR2b
TR1b

Fig. 24 PB. AMP. P.C. BOARD TD-5004 (Front Side)


HEAD PHONE JACK J3
RIGHT CHANNEL VU METER M2
*2 *4
*6
MONITOR SW. SW1
S.O.S. SW. SW2
S.R.T. P.C. BOARD
MULTI JACK J5
GRY/BLK
GRY
RED
WHT
BRN
BLU
VLT
T1b N16-535S
T1 N16-535S
L1b 22mH
L1 22mH
VR1b 50KB
VR1 50KB
TR1
TR2
TR3
TR4
TR5
TR1b
TR2b
TR3b
TR4b
TR5b
D1 IN34A
D1b IN34A
AKAI
P.B
P.B HEAD
EQ
LEFT CHANNEL VU METER
BLK/WHT
HEAD PHONE JACK J3
WHT/BLK
REC. AMP. & OSC. P.C. BOARD
ORG
LEFT CHANNEL VU METER M1
*1 *3 *5
MONITOR SW. SW1
YLW
S.O.S. SW. SW2
S.R.T. P.C. BOARD
MULTI JACK J5
TR1 to TR4 2SC458LG(C)
TR5 2SC711(D)(E)

NOTE 1 GX-600DB
*1,*2,*5,*6···P.B. DOLBY P.C. BOARD
*3,*4 ···OUTPUT LEVEL CONTROL
NOTE 2 GX-600D, 600D PRO
*5, *6···OUTPUT LEVEL CONTROL

Fig. 25 PB. AMP. P.C. BOARD TD-5004 (Reverse Side)

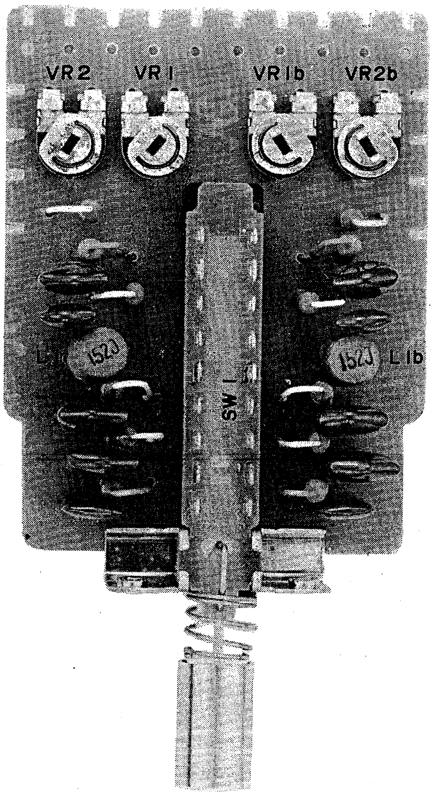
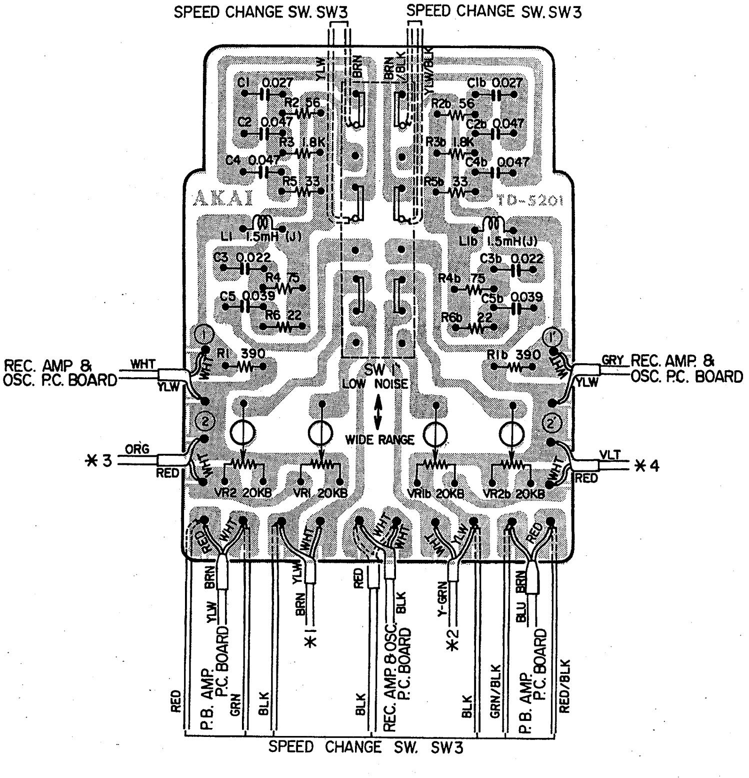

VR2
VR1
VR1b
VR2b
L1
L1b
SW1
152J

Fig. 26 TAPE SELECTOR P.C. BOARD
TD-5201 (Front Side)

5. FREQUENCY RESPONSE ADJUSTMENT
(Recording Bias Voltage Adjustment)

1) Set Speed Selector to 3-3/4 ips. (9.5 cm/sec.).
2) Set Monitor Switch to TAPE and set output volumes to maximum.
3) Set Tape Selector to LOW NOISE position and load a scotch #211 blank tape.
4) Set tape deck to recording mode and supply a 1,000 Hz sine wave signal to the line input from an audio frequency oscillator and adjust input attenuator to obtain a -20 dBm (-20 VU) line output level.
5) Switch the oscillation frequency of the audio frequency oscillator to 10,000 Hz from the condition outlined in item 5-4)
6) Adjust trimmer condensers TC1 70P (left ch) and TC2 70P (right ch) of Recording Amp. OSC., P.C. Board (Fig. 21) to obtain the same level on both channels at both of the two frequencies mentioned in items 5-4) and 5-5).


SPEED CHANGE SW. SW3
SPEED CHANGE SW. SW3
AKAI
TD-5201
C1 0.027
R2 56
C2 0.047
R3 1.8K
C4 0.047
R5 33
L1 1.5mH (J)
C3 0.022
R4 75
C5 0.039
R6 22
R1 390
C1b 0.027
R2b 56
C2b 0.047
R3b 1.8K
C4b 0.047
R5b 33
L1b 1.5mH(J)
C3b 0.022
R4b 75
C5b 0.039
R6b 22
R1b 390
SW 1
LOW NOISE
WIDE RANGE
VR2 20KB
VR1 20KB
VR1b 20KB
VR2b 20KB
REC. AMP &
OSC. P.C. BOARD
REC. AMP &
OSC. P.C. BOARD
✻3
✻4
WHT
YLW
ORG
RED
GRY
VLT
BRN
BLK
GRN
BLU
Y-GRN
GRN/BLK
RED/BLK
YLW/BLK
BRN/BLK
P.B. AMP.
P.C. BOARD
✻1
REC. AMP & OSC.
P.C. BOARD
✻2
P.B. AMP.
P.C. BOARD
SPEED CHANGE SW. SW3

NOTE GX-600DB ONLY
✻1, ✻2 ··· REC. AMP & OSC. P.C. BOARD
✻3, ✻4 ··· REC. DOLBY P.C. BOARD
VR1 to VR2b ··· GX-600DB

Fig. 27 TAPE SELECTOR P.C. BOARD TD-5201 (Reverse Side)

6. DOLBY N.R. AMP. P.C. BOARD ADJUSTMENT (Model GX-600DB only)

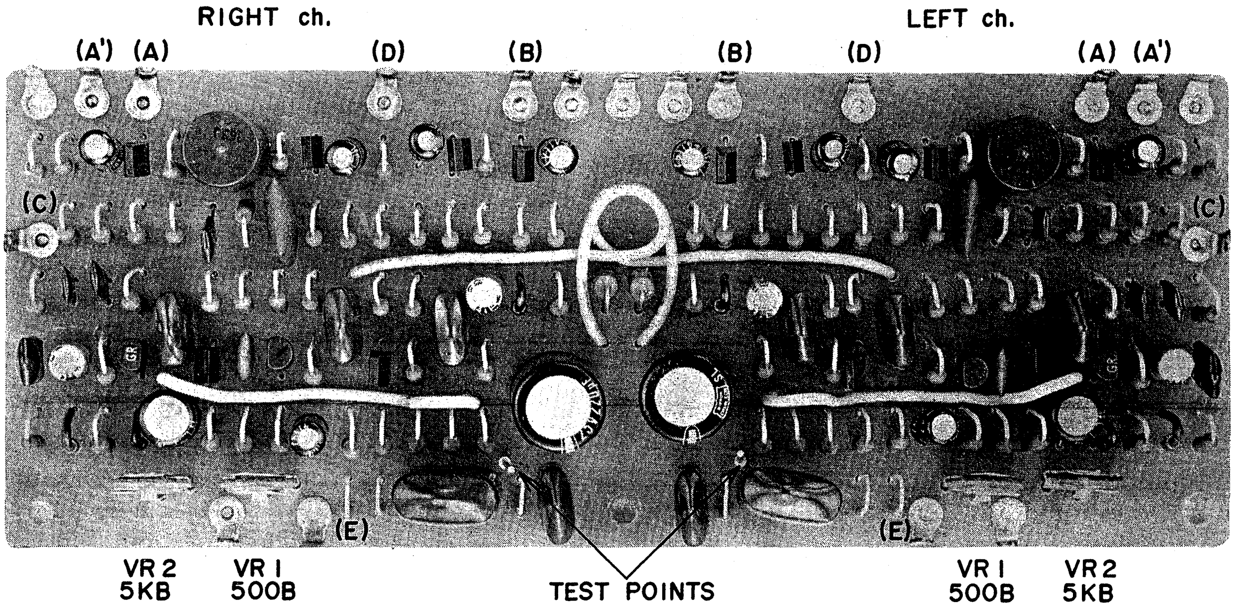

RIGHT ch.
LEFT ch.
(A') (A)
(D)
(B)
(B)
(D)
(A) (A')
(C)
(C)
(E)
(E)
VR 2 5KB
VR 1 500B
TEST POINTS
VR 1 500B
VR 2 5KB

Fig. 28 DOLBY N.R. P.C. BOARD TD-5301 (Front Side)

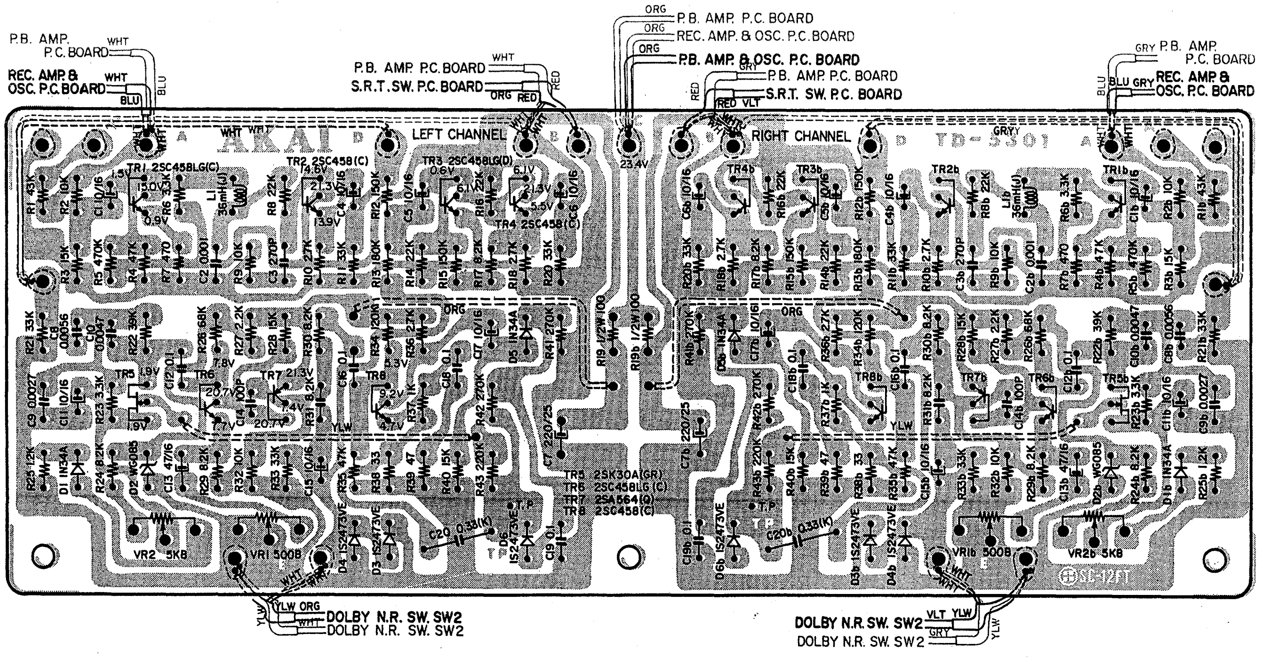

P.B. AMP. P.C. BOARD
REC. AMP. & OSC. P.C. BOARD
P.B. AMP. P.C. BOARD
S.R.T. SW. P.C. BOARD
P.B. AMP. P.C. BOARD
REC. AMP. & OSC. P.C. BOARD
P.B. AMP. & OSC. P.C. BOARD
P.B. AMP. P.C. BOARD
S.R.T. SW. P.C. BOARD
P.B. AMP. P.C. BOARD
REC. AMP. & OSC. P.C. BOARD
WHT
BLU
ORG
RED
VLT
GRY
YLW
AKAI
LEFT CHANNEL
RIGHT CHANNEL
TD-5301
TR1 2SC458LG(C)
TR2 2SC458(C)
TR3 2SC458LG(D)
TR4 2SC458(C)
TR5 2SK30A(GR)
TR6 2SC458LG (C)
TR7 2SA564(Q)
TR8 2SC458(C)
23.4V
T.P.
VR2 5KB
VR1 500B
VR1b 500B
VR2b 5KB
DOLBY N.R. SW. SW2
DOLBY N.R. SW. SW2
DOLBY N.R. SW. SW2
DOLBY N.R. SW. SW2

Fig. 29 DOLBY N.R. P.C. BOARD TD-5301 (Reverse Side)

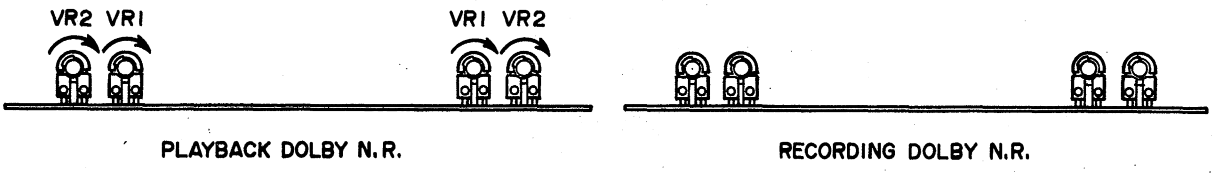

VR2 VR1
VR1 VR2
PLAYBACK DOLBY N.R.
RECORDING DOLBY N.R.

Fig. 30

NOTE: The same P.C. Boards are utilized for Recording Dolby NR and Playback Dolby NR. The Recording Dolby NR Amp. P.C. Board is located on the Recording Amp. OSC., P.C. Board, and the Playback Dolby NR Amp. P.C. Board is located on the Playback Amp. P.C. Board. Adjust left and right channels respectively.

(1) RECORDING DOLBY NR CIRCUIT ADJUSTMENT

Disconnect the wire connected to Dolby circuit input/output terminals (A) and (B). Connect an Audio frequency oscillator to terminal (A) and connect a high sensitivity V.T.V.M. to terminal (B).

1) Turn semi-fixed resistors VR1 500B and VR2 5 kB fully clockwise (Fig. 30).
2) Ground test points (Fig. 28).
3) Set Dolby Switch to OFF position.
4) Supply a 5 kHz, -10 dBm signal which has been verified with a frequency counter from the audio frequency oscillator and confirm that at this time the indication of the high sensitivity V.T.V.M. connected to terminal (B) is 0 dBm.
5) Next, reduce the output of the audio frequency oscillator by -30.5 dB from the condition outlined in item 1-4) (5 kHz -40.5 dB) and at this time confirm that the indication of the high sensitivity V.T.V.M. connected to terminal (B) is -30.5 dB.
6) Set the Dolby Switch to ON position and adjust semi-fixed resistor VR1 500B to obtain a -20.5 dB indication on the high sensitivity V.T.V.M. connected to terminal (B).
7) Next, disconnect ground wire from test points (grounded in item 1-2) and at this time adjust semi-fixed resistor VR2 5 kB to obtain a -22.5 dB indication on the high sensitivity V.T.V.M. connected to terminal (B).

(2) PLAYBACK DOLBY NR CIRCUIT ADJUSTMENT

This adjustment is carried out in essentially the same way as the Recording Dolby Circuit adjustment. Disconnect the wire connected to input/output terminals (A) and (B), connect an audio frequency oscillator to terminal (A), and connect a high sensitivity V.T.V.M. to terminal (B). Turn semi-fixed resistors VR1 500 B and VR2 5 kB fully clockwise, and ground test points.

1) Set Dolby Switch to OFF position and supply a 5 kHz, -10 dBm signal which has been verified with a frequency counter from the Audio frequency oscillator. Confirm that the high sensitivity V.T.V.M. indication at this time is 0 dBm. Next, lower the oscillator output by -22.5 dB and confirm that the high sensitivity V.T.V.M. indication is -22.5 dB.
2) Set Dolby Switch to ON position and at this time adjust semi-fixed resistor VR1 500B to obtain a -32.5 dB high sensitivity V.T.V.M. indication. Next, disconnect ground wire from test points and adjust semi-fixed resistor VR2 5 kB to obtain a -30.5 dB indication.

VII. OPERATING PRINCIPALS OF DOLBY NR CIRCUIT

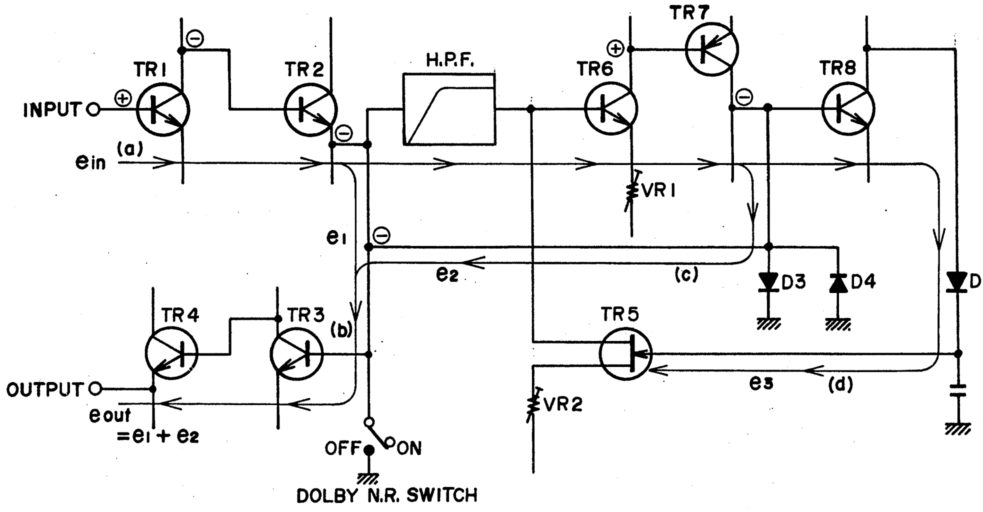


Fig. 31 Recording Dolby NR diagram

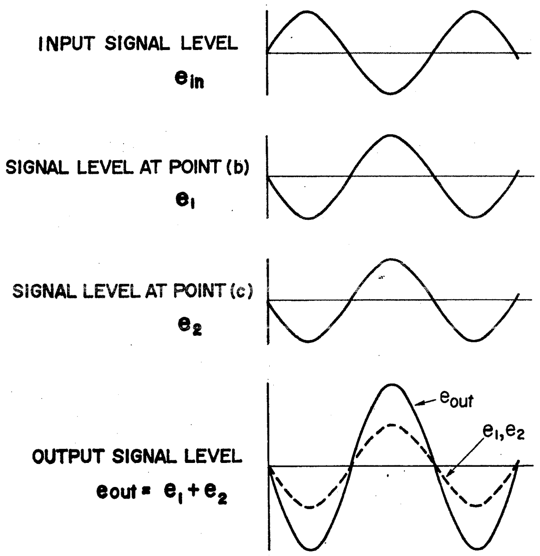


Fig. 32 Level and Phase of each point at individual frequency.

1. RECORDING DOLBY NR (Figs. 31, 32)

In figure 31, the Input Signal e in passes TR1 ~ TR4 and becomes the output signal. The signal from TR2 passes the High Pass Filter (H.P.F.) and is amplified at TR6, TR7. At this time, TR6 signal is controlled by FET (field effect transistor) TR5 gate D.C. bias and the signal from TR7 is varied by means of Diodes D3, D4 characteristics and is emitted as e_2. This output signal e_2 is inphased with TR2 output signal and TR4 output becomes the dolbyized output signal e out.

Accordingly if input signal level e in is small, because FET TR5 becomes an electronic attenuator with a certain impedance value, the output signal e_2 from (C) point is attenuated by H.P.F. and TR5 and becomes e/k. Then it is amplified at TR6, TR7. With A representing this amplification, e_2 becomes as shown in formula (1) below.

$$e_2 = e/k \cdot A \cdot 1 \text{ ...... (1)}$$

Where 1 is the determined attenuated volume by means of Diode D3, D4 characteristics, if

A.K · 1 = m, formula (1) becomes as shown in formula (2) below:

$$e_2 = m_e \text{ .... (2)}$$

Because e_2 of formula (2) and TR2 output signal e_1 is composited, this output signal e out becomes as shown in formula (3) below:

$$e\ out = e_1 + e_2 = e_1 + m_e \text{ .... (3)}$$

In formula (3) above, the relation of e_1 and m_e with regards to the Dolby NR System, is the relation between e out and e_1, i.e., the value of e out is 10 dB higher than e_1. For this reason, at a level of -30 dB lower than the Dolby level, the output signal is 10 dB higher than the more than 400 Hz input signal e in.

Also, if the input signal e in level is high, it is amplified at TR6, current modified at diode D5, and the D.C. voltage at (d) point is also large in proportion to input.

Accordingly, if e_3 becomes large, FET TR5 impedance is reduced and (c) point signal level e^2 gradually becomes smaller. Thus at a level higher than the Dolby level, formula (4) below is applicable:

$$E\ out = e_1 + m_e = e \text{ ...... (4)}$$

$$\because e \gg m_e$$

Consequently, the input and output levels display linear characteristics.

NOTE: H.P.F. (high pass filter)
This filter attenuates an under 400 Hz signal at 18 dB octave.

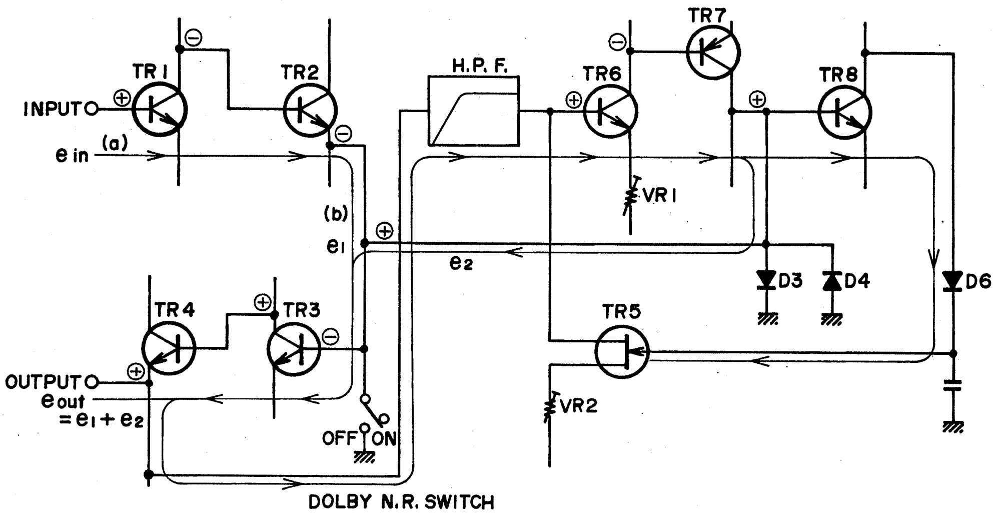

TR1
TR2
H.P.F.
TR6
TR7
TR8
INPUT
e in
(a)
(b)
e1
e2
TR4
TR3
TR5
OUTPUT
eout
=e1+e2
OFF
ON
DOLBY N.R. SWITCH
VR1
VR2
D3
D4
D6

Fig. 33 Playback Dolby NR Diagram

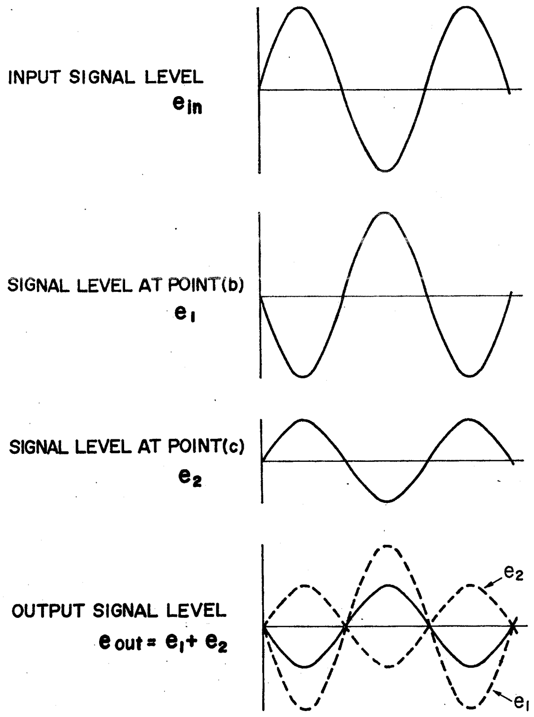


Fig. 34 Level and phase of each point at individual frequency

2. PLAYBACK DOLBY NR (Figs. 33, 34)

In Fig. 33, input signal e in passes TR1 ~ TR4 and becomes the output signal. The signal from TR4 passes H.P.F. and is amplified at TR6, TR7. At this time TR5 signal is controlled by the gate D.C. bias of FET TR5, and TR7 signal is variated by the characteristics of diodes D3, D4 and is emitted as e_2, This output signal e_2 is added as the reverse phase of TR2 output signal and the Dolbylized output signal e out is emitted.
Therefore, the procedure is the same as Recording Dolby NR except that the signal is reverse phased (formula (3))

$$e_o = e + (-e_2) = e + (-m_e)$$

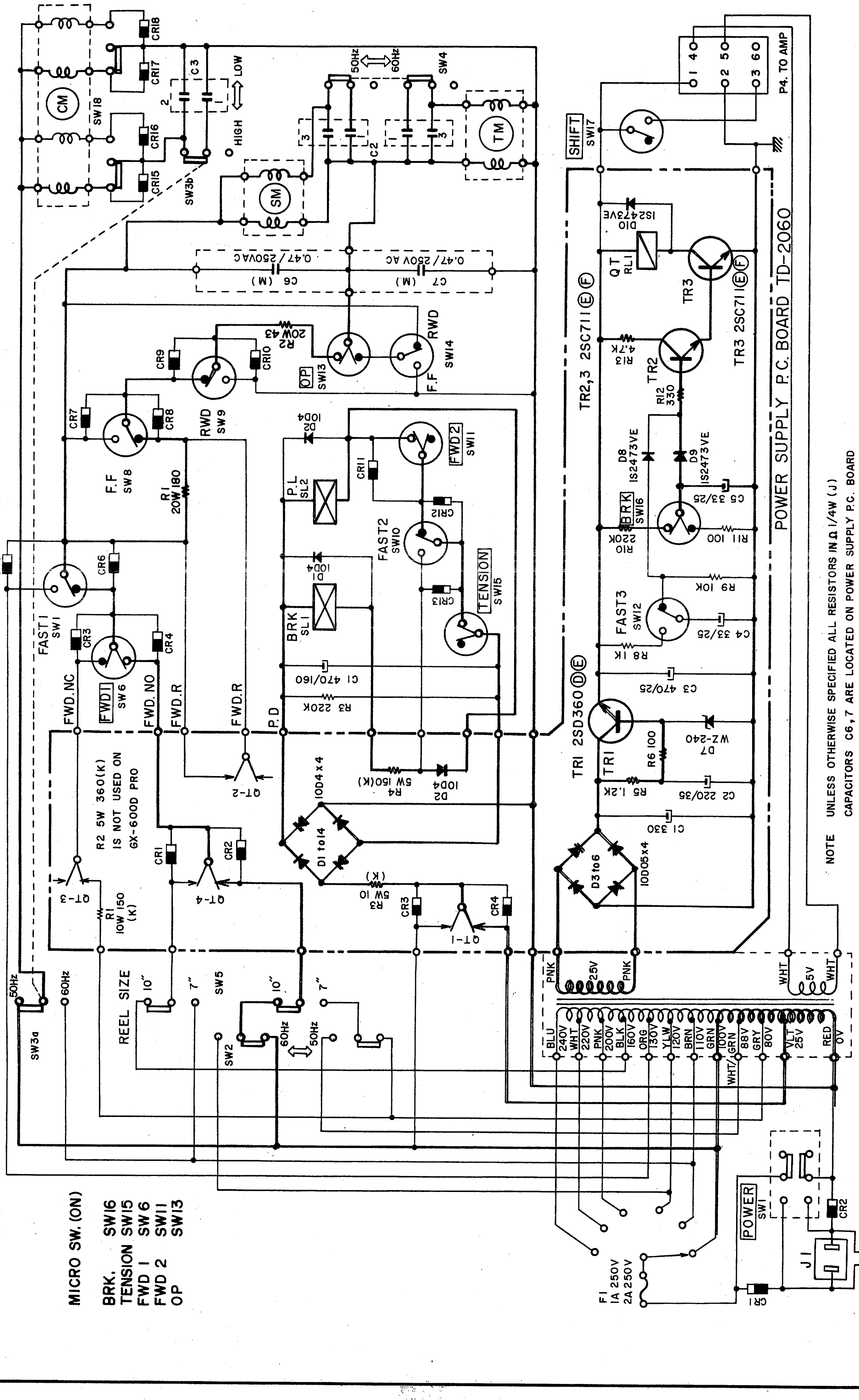
and thus, becomes the exact opposite of Recording Dolby NR.

VIII. DC RESISTANCE OF VARIOUS COILS

The values shown in this chart are average D.C. resistance values.

Designation	Type	D.C. Resistance
CAPSTAN MOTOR	HM2-16MC	Between PNK-RED 130Ω Between PNK-BRN 180Ω Between GRN-GRY 360Ω Between GRN-YLW 370Ω
REEL MOTOR	24XD-TD	Between RED-BLU 72Ω Between YLW-GRN 160Ω
BRAKE SOLENOID	SDC1064 PHT 48V	300Ω
PINCH WHEEL SOLENOID	1660 THT 3	685Ω
QUICK TENSION RELAY	MY-4-0-US-AD4 D.C.24V	650Ω
HEADPHONE OUTPUT TRANSFORMER	N16-535S	Primary 565Ω±15% Secondary 0.95Ω±15%
OSCILLATOR COIL	OT-204	Between 1 ~ 3 0.3Ω Between 4 ~ 6 0.7Ω Between 7 ~ 9 8.2Ω
4 TRACK ERASE HEAD	E4-260	2.0Ω
FULL TRACK ERASE HEAD	E2-100	2.5Ω
4 TRACK RECORDING HEAD	R4-200	8Ω
2 TRACK RECORDING HEAD	R2-100	8Ω
4 TRACK PLAYBACK HEAD	P4-202	268Ω
2 TRACK PLAYBACK HEAD	P2-100	250Ω

Chart 3


CM
SW18
CR15
CR16
CR17
CR18
C3
HIGH
LOW
SW3b
SM
50Hz
60Hz
C2
SW4
TM
C6 (M) 0.47/250VAC
C7 (M) 0.47/250V AC
R2 20W 43
CR9
CR10
OP SW13
RWD SW14
F.F
CR7
CR8
F.F SW8
RWD SW9
R1 20W 180
D2 10D4
FWD2 SW11
CR11
P.L SL2
CR12
FAST2 SW10
D1 10D4
BRK SL1
CR13
TENSION SW15
CR5
CR6
FAST1 SW1
CR3
CR4
FWD1 SW6
FWD.NC
FWD.NO
FWD.R
P.D
C1 470/160
R3 220K
QT-2
R4 5W 150(K)
D2 10D4
R2 5W 360(K) IS NOT USED ON GX-600D PRO
D1 to14 10D4 x4
CR1
CR2
QT-3
QT-4
R1 10W 150 (K)
R3 5W 10 (K)
CR3
CR4
QT-1
SW3a
50Hz
60Hz
REEL SIZE
10"
7"
SW5
SW2
SHIFT SW17
1 4 2 5 3 6
P4. TO AMP
D10 1S2473VE
QT RL1
TR3
TR2,3 2SC711 Ⓔ Ⓕ
R13 4.7K
TR2
R12 330
D8 1S2473VE
D9 1S2473VE
C5 33/25
BRK SW16
R10 220K
R11 100
R9 10K
FAST3 SW12
C4 33/25
R8 1K
C3 470/25
TR1 2SD360 Ⓓ Ⓔ
TR1
R6 100
D7 WZ-240
R5 1.2K
C2 220/35
C1 330
D3 to 6 10D05x4
POWER SUPPLY P.C. BOARD TD-2060
PNK 25V PNK
WHT 5V WHT
BLU 240V
WHT 220V
PNK 200V
BLK 160V
ORG 130V
YLW 120V
BRN 110V
GRN 100V
WHT/GRN
88V
GRY 80V
VLT 25V
RED 0V
T1 TDT-4
POWER SW1
CR2
J1
AC100to240V 50Hz/60Hz
F1 1A 250V 2A 250V
CR1

NOTE UNLESS OTHERWISE SPECIFIED ALL RESISTORS IN Ω 1/4W (J)
CAPACITORS C6, 7 ARE LOCATED ON POWER SUPPLY P.C. BOARD
MICRO SWITCH SW12, 16 ARE NOT LOCATED ON POWER SUPPLY P.C. BOARD
-▮▯- INDICATES SPARK QUENCHER 0.1μF+120Ω 250V A.C.

UNIVERSAL

FWD. MODE

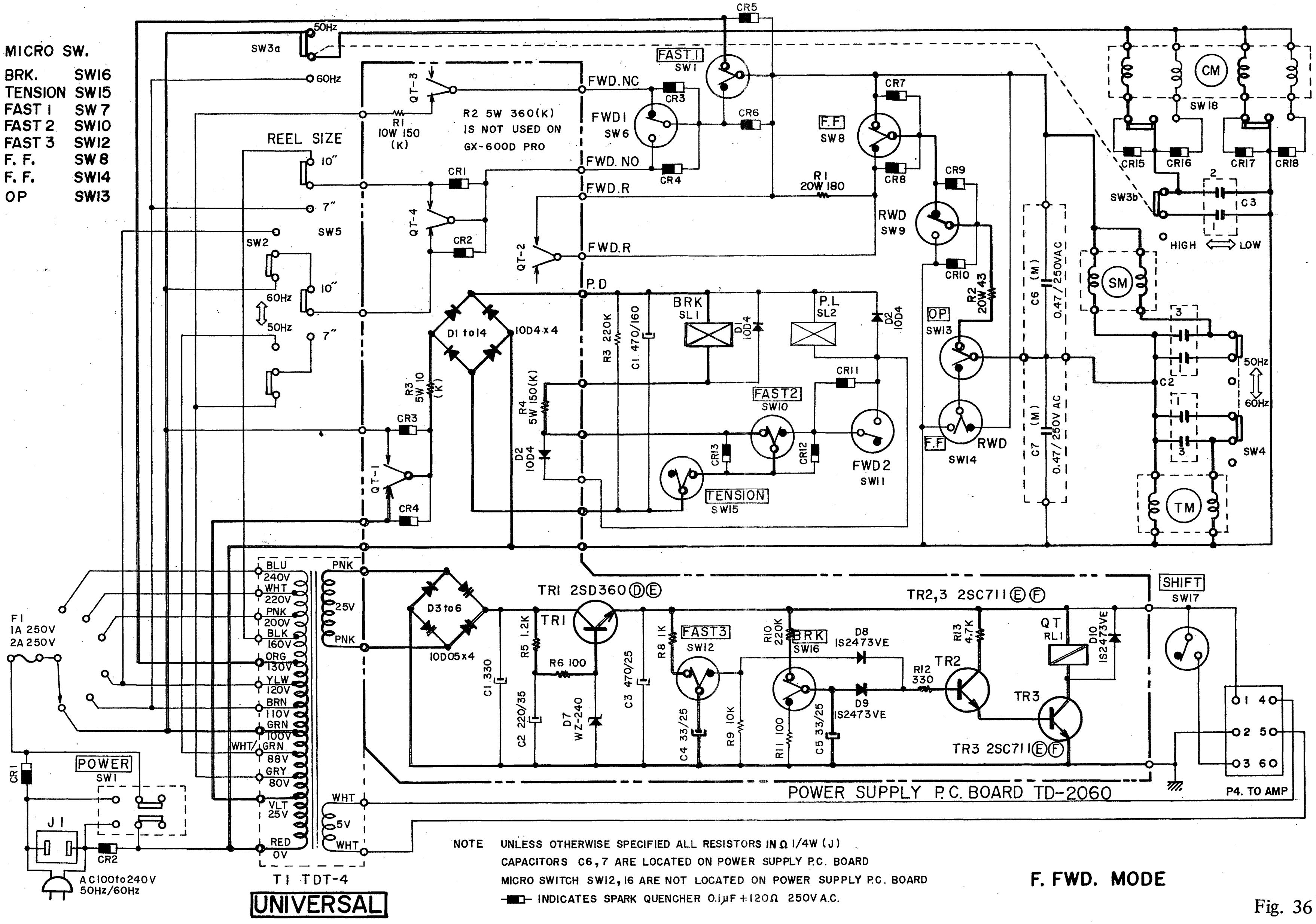
MICRO SW. (ON)

BRK.	SW16
TENSION	SW15
FWD 1	SW6
FWD 2	SW11
OP	SW13

Fig. 35

MICRO SW.

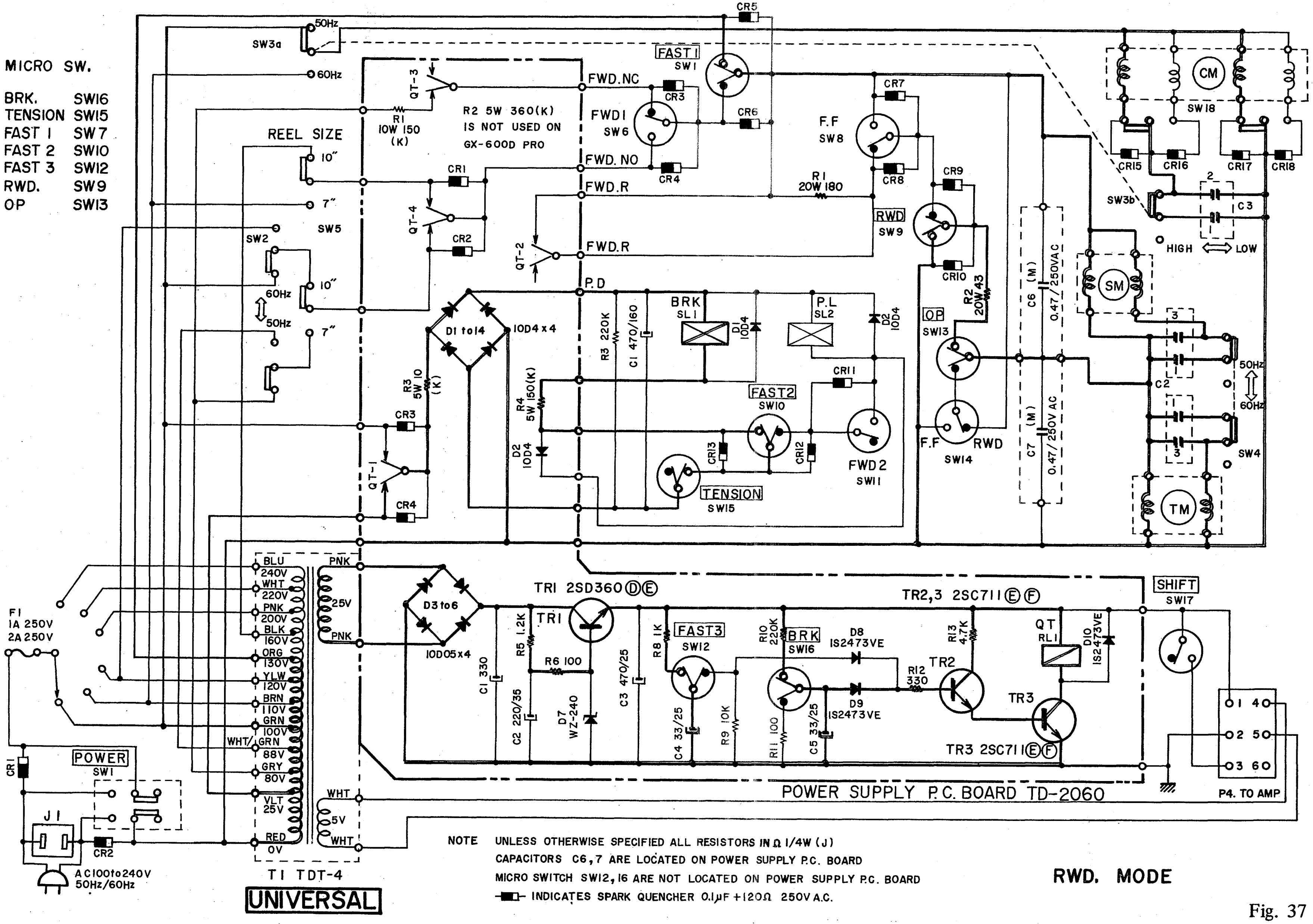
BRK.	SW16
TENSION	SW15
FAST 1	SW7
FAST 2	SW10
FAST 3	SW12
F. F.	SW8
F. F.	SW14
OP	SW13


SW3a
50Hz
60Hz
REEL SIZE
10"
7"
SW5
SW2
60Hz
50Hz
QT-3
R1 10W 150 (K)
R2 5W 360(K) IS NOT USED ON GX-6000 PRO
QT-4
CR1
CR2
QT-2
QT-1
CR3
CR4
R3 5W 10 (K)
D1 to14
10D4x4
FWD.NC
FWD.NO
FWD.R
FWD.R
P.D
FAST 1
SW1
CR5
CR6
FWD1
SW6
F.F
SW8
CR7
CR8
R1 20W 180
RWD
SW9
CR9
CR10
R2 20W 43
OP
SW13
F.F
RWD
SW14
R3 220K
C1 470/160
BRK
SL1
D1 10D4
P.L
SL2
D2 10D4
CR11
FAST2
SW10
CR12
CR13
FWD2
SW11
TENSION
SW15
R4 5W 150(K)
D2 10D4
C6 (M) 0.47/250VAC
C7 (M) 0.47/250V AC
CM
SW18
CR15
CR16
CR17
CR18
SW3b
2
C3
HIGH
LOW
SM
3
C2
50Hz
60Hz
SW4
TM
BLU
240V
WHT
220V
PNK
200V
BLK
160V
ORG
130V
YLW
120V
BRN
110V
GRN
100V
WHT/GRN
88V
GRY
80V
VLT
25V
RED
0V
PNK
25V
PNK
WHT
5V
WHT
T1 TDT-4
UNIVERSAL
F1
1A 250V
2A 250V
CR1
POWER
SW1
J1
CR2
AC100to240V
50Hz/60Hz
TR1 2SD360ⒹⒺ
D3 to6
10D05x4
C1 330
R5 1.2K
TR1
R6 100
C2 220/35
D7 WZ-240
C3 470/25
R8 1K
FAST3
SW12
C4 33/25
R9 10K
R10 220K
BRK
SW16
R11 100
C5 33/25
D8 IS2473VE
D9 IS2473VE
R12 330
TR2,3 2SC711ⒺⒻ
R13 4.7K
TR2
TR3
QT
RL1
D10 IS2473VE
TR3 2SC711ⒺⒻ
POWER SUPPLY P.C. BOARD TD-2060
SHIFT
SW17
1 4
2 5
3 6
P4. TO AMP

NOTE UNLESS OTHERWISE SPECIFIED ALL RESISTORS IN Ω 1/4W (J)
CAPACITORS C6,7 ARE LOCATED ON POWER SUPPLY P.C. BOARD
MICRO SWITCH SW12,16 ARE NOT LOCATED ON POWER SUPPLY P.C. BOARD
-■- INDICATES SPARK QUENCHER 0.1μF+120Ω 250V A.C.

F. FWD. MODE

Fig. 36



SW3a
50Hz
60Hz
REEL SIZE
10"
7"
SW5
SW2
60Hz
50Hz
QT-3
R1 10W 150 (K)
R2 5W 360(K) IS NOT USED ON GX-600D PRO
QT-4
CR1
CR2
QT-2
QT-1
CR3
CR4
R3 5W 10 (K)
D1 to14
10D4 x 4
FWD.NC
FWD1 SW6
FWD.NO
FWD.R
P.D
FAST1 SW1
CR5
CR6
R4 5W 150(K)
D2 10D4
R3 220K
C1 470/160
BRK SL1
D1 10D4
P.L SL2
D2 10D4
CR11
FAST2 SW10
CR13
CR12
TENSION SW15
FWD2 SW11
F.F SW8
CR7
CR8
R1 20W 180
RWD SW9
CR9
CR10
R2 20W 43
OP SW13
F.F
RWD
SW14
C6 (M) 0.47/250VAC
C7 (M) 0.47/250V AC
CM
SW18
CR15
CR16
CR17
CR18
SW3b
C3
HIGH
LOW
SM
C2
50Hz
60Hz
SW4
TM
F1 1A 250V 2A 250V
CR1
POWER SW1
J1
CR2
AC100to240V 50Hz/60Hz
BLU 240V
WHT 220V
PNK 200V
BLK 160V
ORG 130V
YLW 120V
BRN 110V
GRN 100V
WHT/GRN 88V
GRY 80V
VLT 25V
RED 0V
PNK
25V
PNK
WHT
5V
WHT
T1 TDT-4
UNIVERSAL
D3 to6
10D05x4
TR1 2SD360 ⒹⒺ
TR1
R5 1.2K
R6 100
C1 330
C2 220/35
D7 WZ-240
C3 470/25
R8 1K
FAST3 SW12
C4 33/25
R9 10K
R10 220K
BRK SW16
R11 100
C5 33/25
D8 1S2473VE
D9 1S2473VE
R12 330
TR2
R13 4.7K
TR2,3 2SC711ⒺⒻ
QT RL1
D10 1S2473VE
TR3
TR3 2SC711ⒺⒻ
SHIFT SW17
1 4
2 5
3 6
P4. TO AMP
POWER SUPPLY P.C. BOARD TD-2060

MICRO SW.

BRK.	SW16
TENSION	SW15
FAST 1	SW7
FAST 2	SW10
FAST 3	SW12
RWD.	SW9
OP	SW13

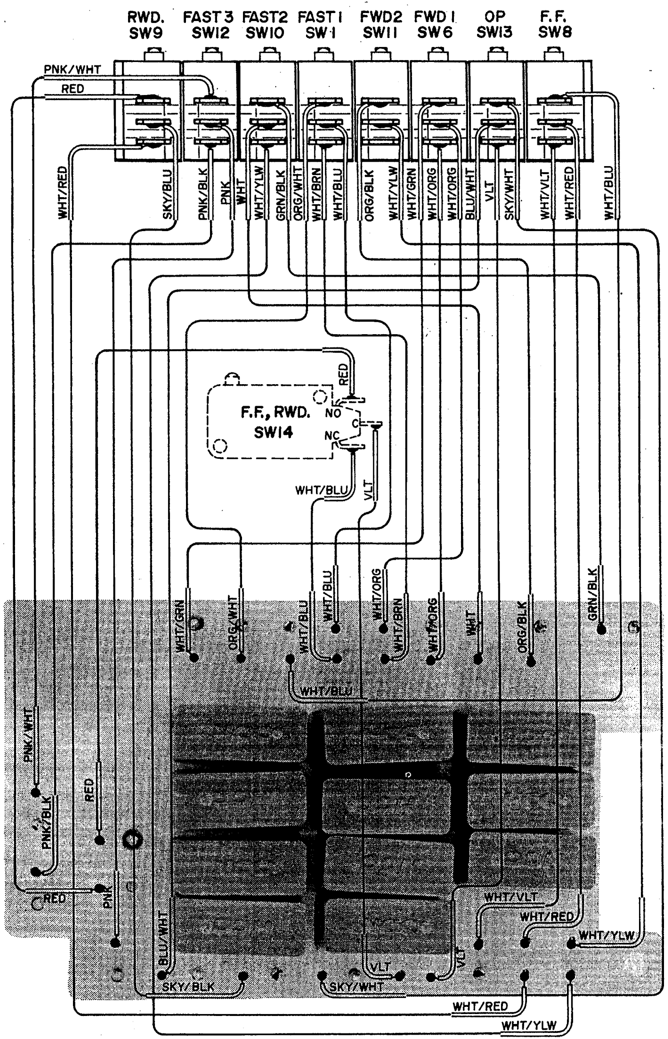
NOTE UNLESS OTHERWISE SPECIFIED ALL RESISTORS IN Ω 1/4W (J)
CAPACITORS C6, 7 ARE LOCATED ON POWER SUPPLY P.C. BOARD
MICRO SWITCH SW12, 16 ARE NOT LOCATED ON POWER SUPPLY P.C. BOARD
-▮- INDICATES SPARK QUENCHER 0.1μF +120Ω 250V A.C.

RWD. MODE

Fig. 37

X. COMPOSITE VIEWS OF COMPONENTS

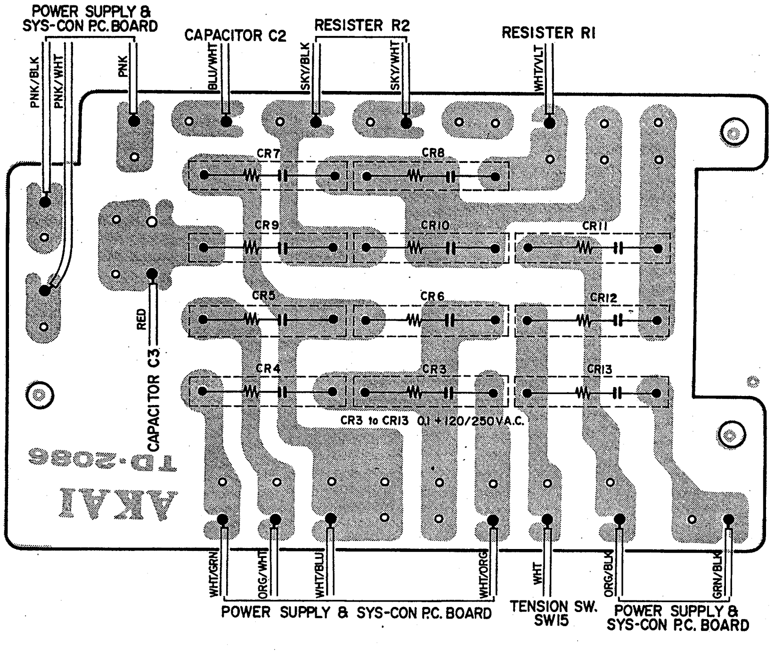
1. SPARK QUENCHER P.C. BOARD (A) TD-2086 (Front Side)



RWD. SW9
FAST3 SW12
FAST2 SW10
FAST1 SW1
FWD2 SW11
FWD1 SW6
OP SW13
F.F. SW8
PNK/WHT
RED
WHT/RED
SKY/BLU
PNK/BLK
PNK
WHT
WHT/YLW
GRN/BLK
ORG/WHT
WHT/BRN
WHT/BLU
ORG/BLK
WHT/YLW
WHT/GRN
WHT/ORG
WHT/ORG
BLU/WHT
VLT
SKY/WHT
WHT/VLT
WHT/RED
WHT/BLU
F.F., RWD. SW14
NO
C
NC
RED
WHT/BLU
VLT
WHT/GRN
ORG/WHT
WHT/BLU
WHT/BLU
WHT/ORG
WHT/BRN
WHT/ORG
WHT
ORG/BLK
GRN/BLK
WHT/BLU
PNK/WHT
PNK/BLK
RED
RED
PNK
BLU/WHT
SKY/BLK
SKY/WHT
VLT
VLT
WHT/VLT
WHT/RED
WHT/YLW
WHT/RED
WHT/YLW

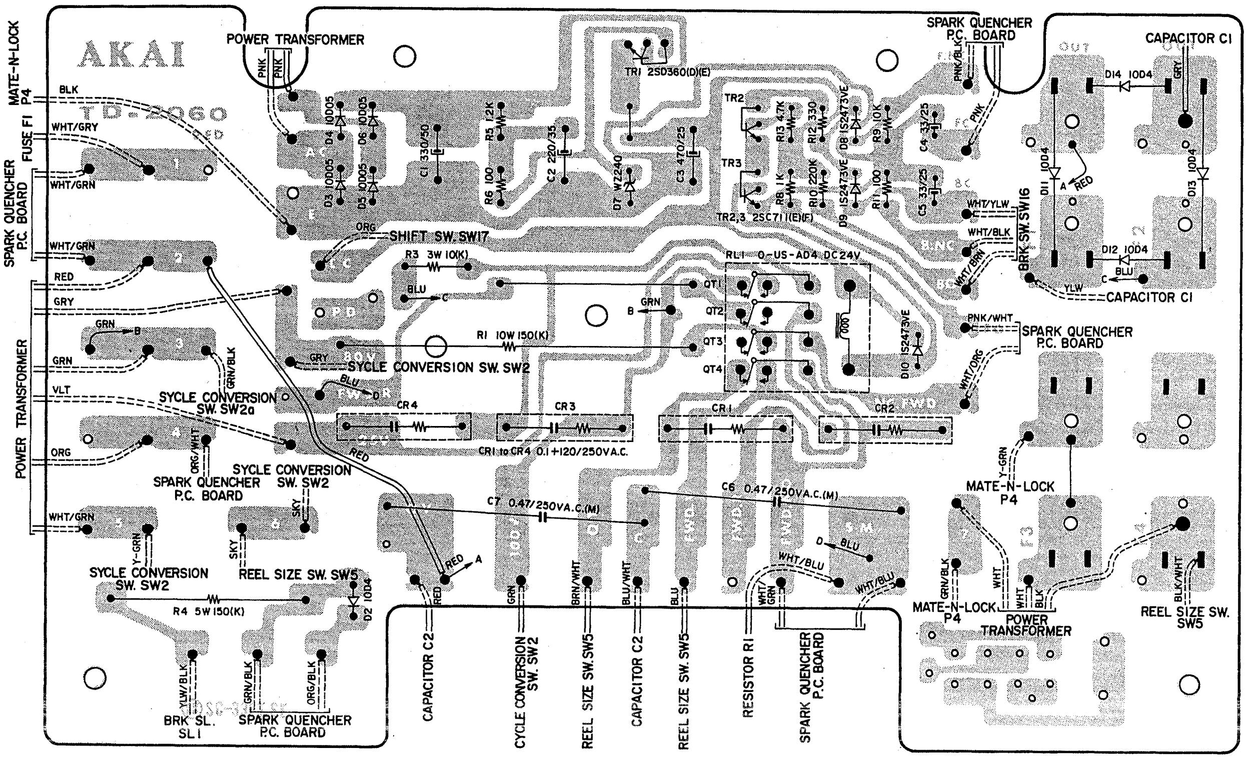
SPARK QUENCHER P.C. BOARD TD-2086 (FACE)

2. SPARK QUENCHER P.C. BOARD (A) TD-2086 (Reverse Side)

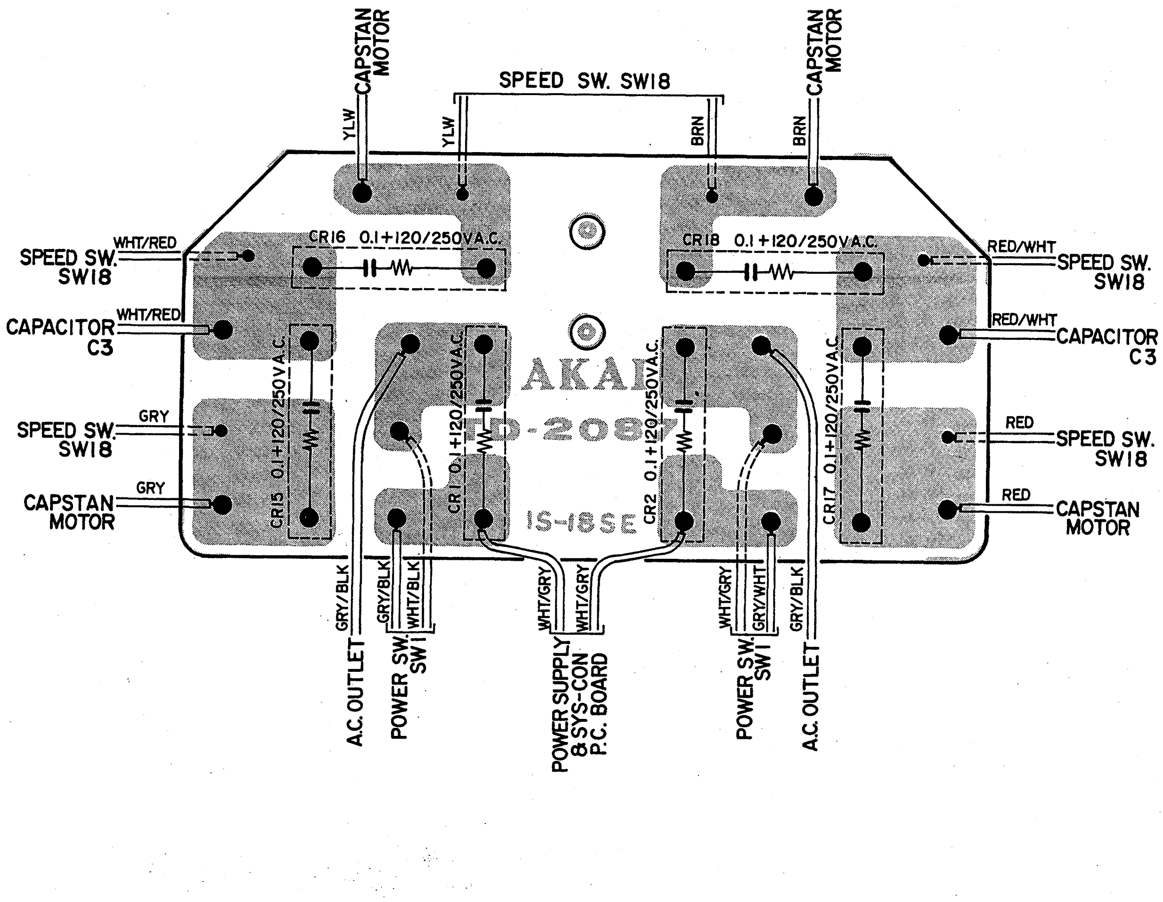


POWER SUPPLY & SYS-CON P.C. BOARD
PNK/BLK
PNK/WHT
PNK
CAPACITOR C2
BLU/WHT
RESISTER R2
SKY/BLK
SKY/WHT
RESISTER R1
WHT/VLT
CR7
CR8
CR9
CR10
CR11
CR5
CR6
CR12
CR4
CR3
CR13
CR3 to CR13 0.1 + 120/250V A.C.
RED
CAPACITOR C3
AKAI
TD-2086
WHT/GRN
ORG/WHT
WHT/BLU
WHT/ORG
POWER SUPPLY & SYS-CON P.C. BOARD
WHT
TENSION SW. SW15
ORG/BLK
GRN/BLK
POWER SUPPLY & SYS-CON P.C. BOARD

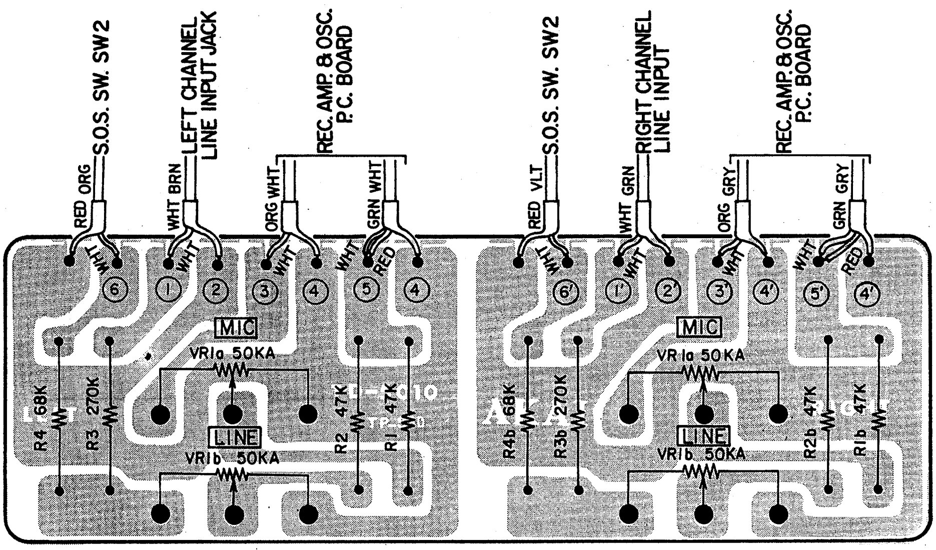
3. POWER SUPPLY & SYS. CON. P.C. BOARD TD-2060


AKAI
TD-2060
POWER TRANSFORMER
MATE-N-LOCK P4
FUSE F1
SPARK QUENCHER P.C. BOARD
BLK
WHT/GRY
WHT/GRN
RED
GRY
GRN
VLT
ORG
PNK
TR1 2SD360(D)(E)
D4 10D05
D6 10D05
D3 10D05
D5 10D05
C1 330/50
R5 1.2K
R6 100
C2 220/35
D7 WZ240
C3 470/25
TR2
TR3
R13 4.7K
R12 330
R8 1K
R10 220K
D8 1S2473VE
D9 1S2473VE
R9 10K
R11 100
C4 33/25
C5 33/25
TR2,3 2SC711(E)(F)
SHIFT SW. SW17
R3 3W 10(K)
BLU
RL1 0-US-AD4 DC24V
R1 10W 150(K)
SYCLE CONVERSION SW. SW2
SYCLE CONVERSION SW. SW2a
CR4
CR3
CR1
CR2
CR1 to CR4 0.1+120/250V.A.C.
C7 0.47/250V.A.C.(M)
C6 0.47/250V.A.C.(M)
D10 1S2473VE
SPARK QUENCHER P.C. BOARD
SYCLE CONVERSION SW. SW2
REEL SIZE SW. SW5
R4 5W 150(K)
D2 10D4
BRK SL. SL1
SPARK QUENCHER P.C. BOARD
CAPACITOR C2
CYCLE CONVERSION SW. SW2
REEL SIZE SW.SW5
CAPACITOR C2
REEL SIZE SW.SW5
RESISTOR R1
SPARK QUENCHER P.C. BOARD
CAPACITOR C1
D14 10D4
D11 10D4
D13 10D4
D12 10D4
WHT/YLW
WHT/BLK
BRK SW. SW16
YLW
PNK/WHT
WHT/ORG
Y-GRN
MATE-N-LOCK P4
WHT/BLU
POWER TRANSFORMER
REEL SIZE SW. SW5

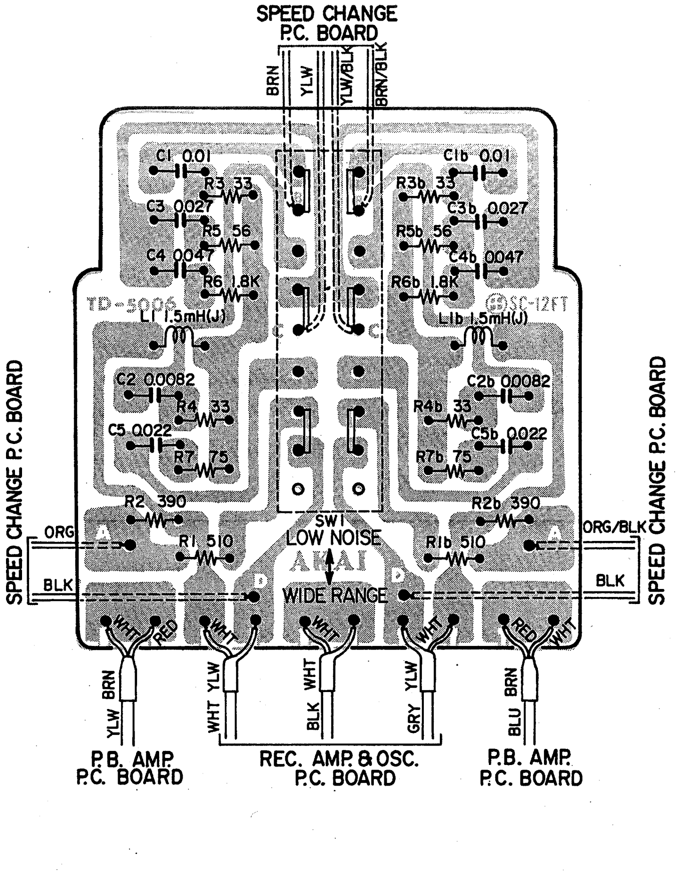
4. SPARK QUENCHER P.C. BOARD (B) TD-2087


CAPSTAN MOTOR
YLW
SPEED SW. SW18
BRN
CAPSTAN MOTOR
SPEED SW. SW18
WHT/RED
CR16 0.1+120/250V.A.C.
CR18 0.1+120/250V.A.C.
RED/WHT
SPEED SW. SW18
CAPACITOR C3
CAPACITOR C3
GRY
SPEED SW. SW18
RED
SPEED SW. SW18
CAPSTAN MOTOR
CAPSTAN MOTOR
CR15 0.1+120/250V.A.C.
CR1 0.1+120/250V.A.C.
CR2 0.1+120/250V.A.C.
CR17 0.1+120/250V.A.C.
AKAI
TD-2087
IS-18SE
GRY/BLK
WHT/BLK
WHT/GRY
GRY/WHT
A.C. OUTLET
POWER SW. SW1
POWER SUPPLY & SYS-CON P.C. BOARD
POWER SW. SW1
A.C. OUTLET

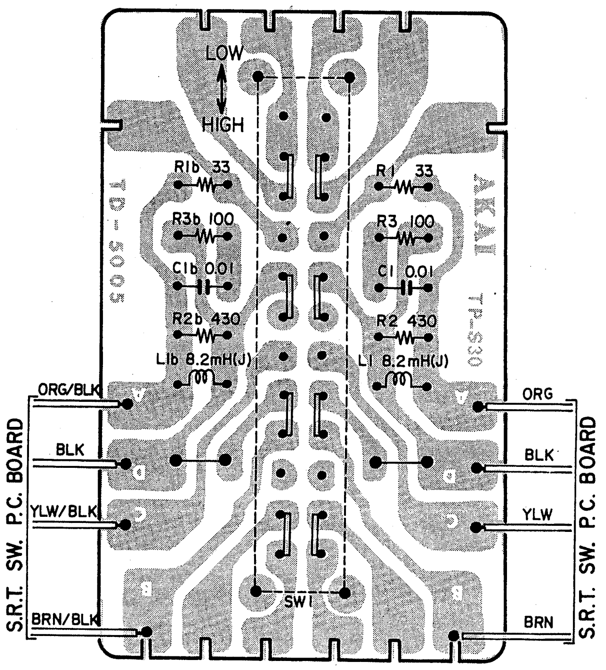
5. VOLUME P.C. BOARD TD-5010


S.O.S. SW. SW2
LEFT CHANNEL LINE INPUT JACK
REC. AMP. & OSC. P.C. BOARD
S.O.S. SW. SW2
RIGHT CHANNEL LINE INPUT
REC. AMP. & OSC. P.C. BOARD
RED ORG
WHT BRN
ORG WHT
GRN WHT
RED VLT
WHT GRN
ORG GRY
GRN GRY
WHT
RED
6
1
2
3
4
5
4
6'
1'
2'
3'
4'
5'
4'
MIC
VR1a 50KA
LINE
VR1b 50KA
R4 68K
R3 270K
R2 47K
R1 47K
R4b 68K
R3b 270K
R2b 47K
R1b 47K

6. SRT SW. P.C. BOARD TD-5006


SPEED CHANGE P.C. BOARD
BRN
YLW
YLW/BLK
BRN/BLK
C1 0.01
R3 33
C3 0.027
R5 56
C4 0.047
R6 1.8K
TD-5006
L1 1.5mH(J)
C2 0.0082
R4 33
C5 0.022
R7 75
R2 390
R1 510
C1b 0.01
R3b 33
C3b 0.027
R5b 56
C4b 0.047
R6b 1.8K
SC-12FT
L1b 1.5mH(J)
C2b 0.0082
R4b 33
C5b 0.022
R7b 75
R2b 390
R1b 510
A
D
C
SW1
LOW NOISE
AKAI
WIDE RANGE
SPEED CHANGE P.C. BOARD
ORG
BLK
SPEED CHANGE P.C. BOARD
ORG/BLK
BLK
WHT
RED
BRN
YLW
WHT
YLW
WHT
BLK
YLW
GRY
BRN
BLU
P.B. AMP. P.C. BOARD
REC. AMP. & OSC. P.C. BOARD
P.B. AMP. P.C. BOARD

7. SPEED CHANGE P.C. BOARD TD-5005



LOW
HIGH
R1b 33
R3b 100
C1b 0.01
R2b 430
L1b 8.2mH(J)
R1 33
R3 100
C1 0.01
R2 430
L1 8.2mH(J)
TD-5005
AKAI
TP-S30
SW1
ORG/BLK
BLK
YLW/BLK
BRN/BLK
ORG
BLK
YLW
BRN
A
D
C
B
S.R.T. SW. P.C. BOARD
S.R.T. SW. P.C. BOARD

SECTION 2

PARTS LIST

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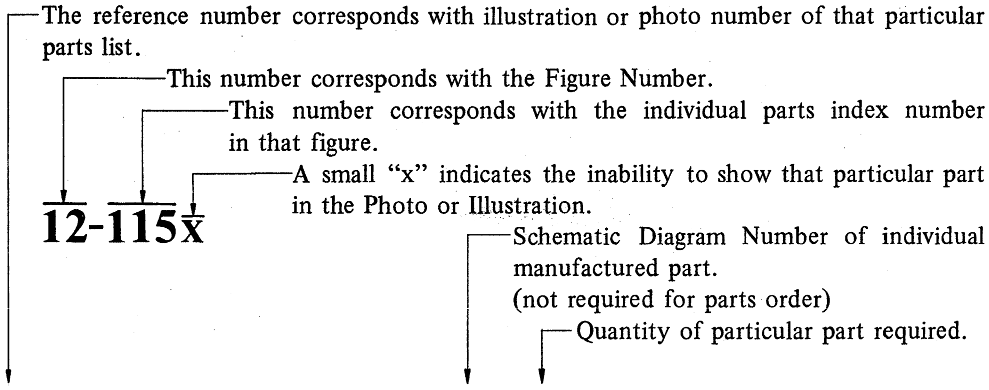
HOW TO USE THIS PARTS LIST

1. This parts list is compiled by various individual blocks based on assembly process.
2. When ordering parts, please describe parts number, serial number, and model number in detail.
3. How to read list.



—The reference number corresponds with illustration or photo number of that particular parts list.

—This number corresponds with the Figure Number.

—This number corresponds with the individual parts index number in that figure.

—A small "x" indicates the inability to show that particular part in the Photo or Illustration.

12-115x

—Schematic Diagram Number of individual manufactured part. (not required for parts order)

—Quantity of particular part required.

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
		FLYWHEEL BLOCK #13		
12-115x	800425	Flywheel Block Assy. Comp.	RDG#13	1
12-116	244506	Flywheel Only	RD-233	1
12-117x	244754	Felt, Flywheel	RD-275	1
12-118	251324	Main Metal Case	RD-236	1
12-119	253080	Main Metal	RD-237	1

4. The symbol numbers shown on the P.C. Board list can be matched with the Composite Views of components of the Schematic Diagram or Service Manual.
5. The indications of Resistors and Capacitors in the photos of P.C. Board are being eliminated.
6. The shape of the parts and parts name, etc. can be confirmed by comparing them with the parts shown on the Electrical Parts Table of P.C. Board.
7. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List.

   It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index. (meaning of ref. no. outlined in Item 3 above).
8. Utilize separate "Price List for Parts" to determine unit price. The most simple method of finding parts Price is to utilize the reference number.

ELECTRICAL PARTS TABLE

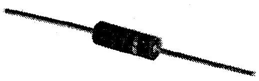
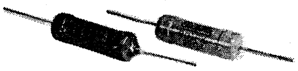
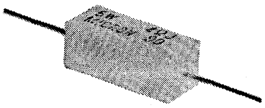
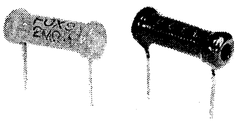
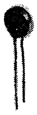
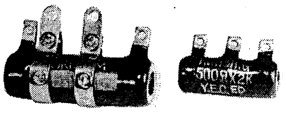
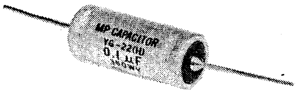
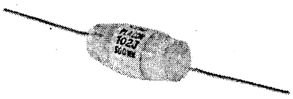
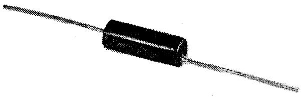
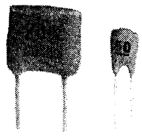
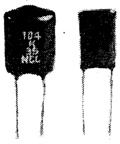
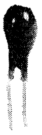
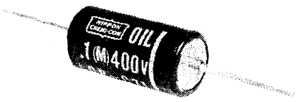
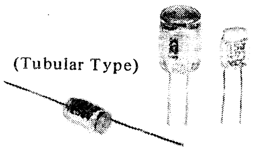
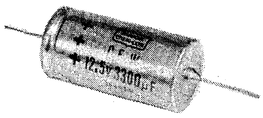
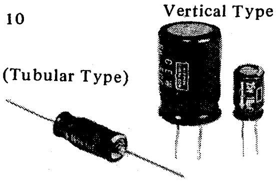
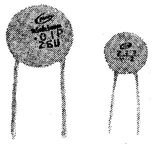
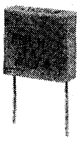
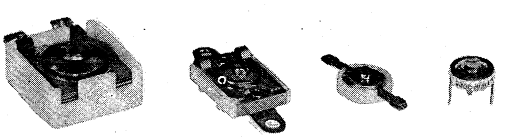
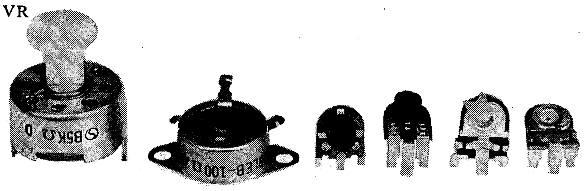
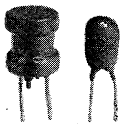
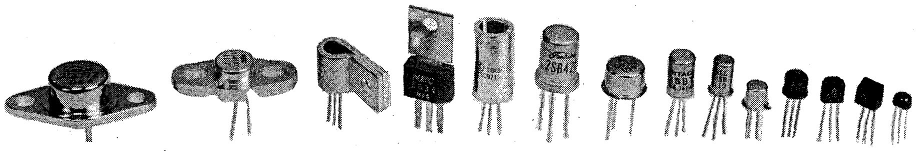
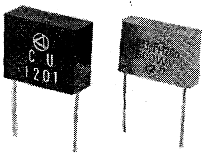
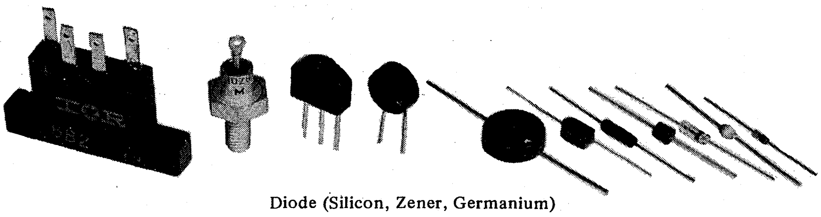
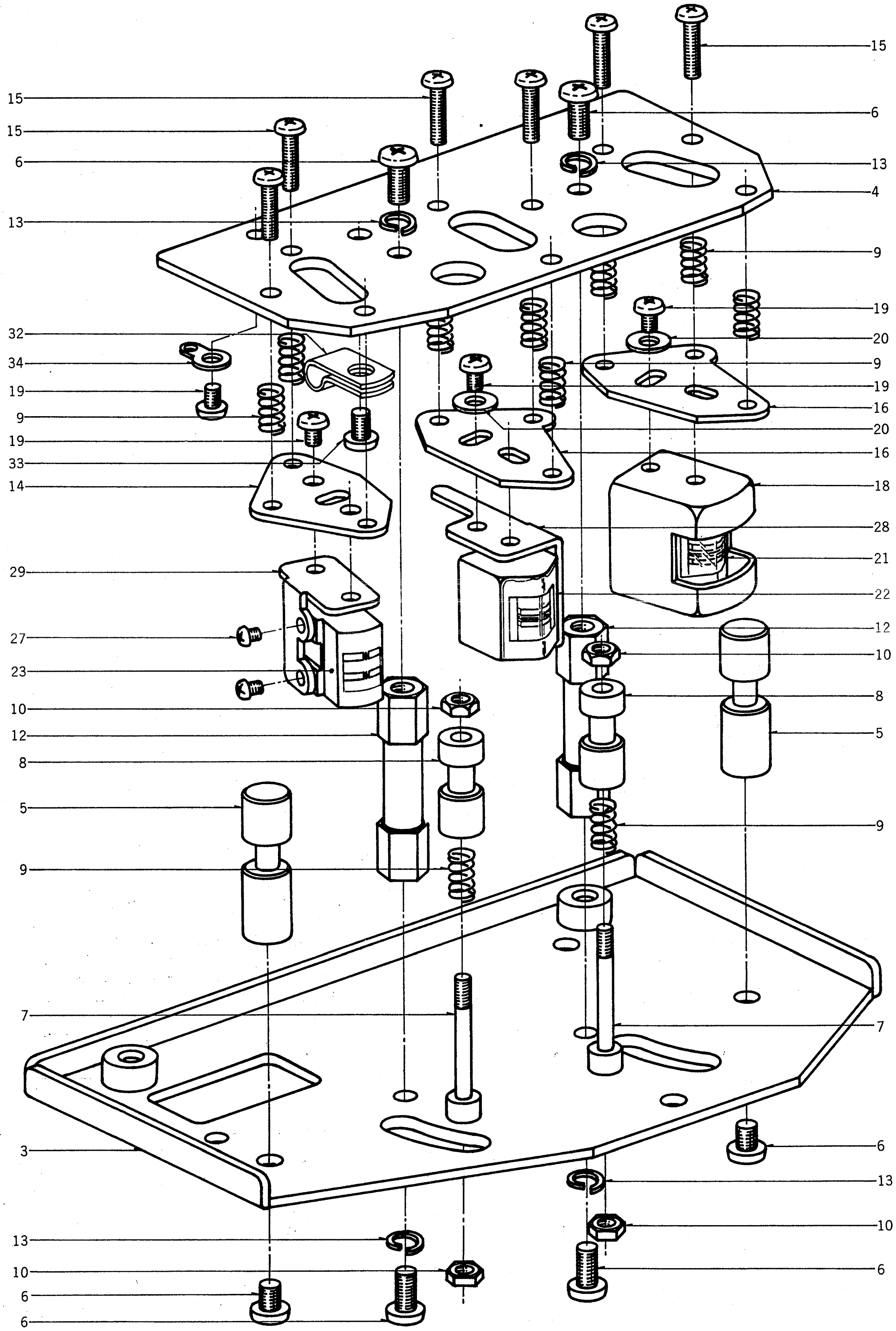
Because the indication of resistors and capacitors in the P. C. Board photos are being eliminated, please confirm parts name and shape by comparing them with the parts shown in this table.	1  Solid Resistor	2 Stopper Type Insulator Type Carbon Resistor	3  Metal Oxide Film Resistor
4  Cement Resistor	5  Wire-Wound Resistor	6  Thermister	7  Enamel Resistor
1  MP Capacitor (Tubular Type)	2  Plastic Capacitor	3  Mylar Capacitor	4  VFM (Hi-Q) Capacitor
5  Mylar Capacitor	6  Tantalum Capacitor	7  Oil Capacitor (Tubular Type)	8 Vertical Type (Tubular Type)  Styrol Capacitor
9  Electrolytic Capacitor (Tubular Type)	10 Vertical Type (Tubular Type)  Electrolytic Capacitor	11  Ceramic Capacitor	12  Metalized Mylar (Paper) Capacitor
13  Trimmer Condenser		VR  Semi-Fixed Volume	
L  Ferri Inductor	TR  Transistor		
CR  Spark Quencher	D  Diode (Silicon, Zener, Germanium)		

FIG. 1 ILLUSTRATION OF TD HEAD BLOCK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TD HEAD BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
1-1x	BH587777	TDHead Block Comp.	TD-1, 3	1
1-2x	BH587788	TD Head Block Comp. (PRO)	TD-2	1
1-3	HZ581106	Head Base A, w/prop	TD-0001	1
1-4	HZ581117	Head Base B	TD-0004	1
1-5	HZ803597	Tape Guide A	RD-3	1
1-6	ZS537006	Screw, binding head 4x8		6
1-7	MH578957	Tape Guide Prop	TD-0003	2
1-8	HZ532710	Tape Guide B	TW-0006	2
1-9	ZG466312	Angle Adjust Spring E	BS-0018	11
1-10	ZW273835	Nut M3		4
1-11x	ZW273745	Spring Washer M3		2
1-12	MH529233	Head Base Prop B	ND-0017	2
1-13	ZW273914	Spring Washer M4		4
1-14	HZ532732	CH Retaining Base	TW-0008	1
1-15	ZS562432	Screw, binding head 3x13		9
1-16	HZ532765	PH Retaining Base	TW-0010	2
1-17x	ZG540584	Angle Adjust Spring G (PRO)	TW-0025	3
1-18	HZ532776	Shield Case	TW-0011	1
1-19	ZS396000	Screw, binding head 3x4		7
1-20	ZW413256	Washer (SPC) D3.4x7.8x0.5t		2
1-21	HP536501	P.B. HEAD BLOCK P4-202		1
1-22	HR384513	REC HEAD R4-200		1
1-23	HE563220	ERASE HEAD BLOCK E4-260		1
1-24x	HP552205	P.B. HEAD P2-100 (PRO)		1
1-25x	HR552216	REC. HEAD R2-100 (PRO)		1
1-26x	HE587790	ERASE HEAD E2-100 (PRO)		1
1-27	ZS394525	Screw, binding head 2x3		4
1-28	HA533597	RH Angle	TW-0201	1
1-29	HA533608	EH Angle	TW-0202	1
1-30x	ZS460438	Screw, binding head 2x3		2
1-31x	EA382713	Head Connector P.C. Board	RD-A8	1
1-32	EJ315101	Nylon Clip HP-4N	2-7-38	1
1-33	ZS355511	Screw, binding head 3x6		1
1-34	ZW273881	Earth Lug M4		1

MAIN MOTOR BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
2-1x	BM587507	Main Motor Block Comp. HM2-16TD	TD	1
2-2	MZ526421	16 Motor Cover, w/metal	TW-7023	1
2-3	MZ448222	24 Motor Cover, w/metal	24X-781	1
2-4	ZS427037	Screw, pan head 4x50, w/washer		4
2-5	MR540876	Motor Pulley Comp.	MC-7201	1
2-6	ZS203016	Screw, oval countersunk head 3x15		1
2-7	MZ316293	Motor Mt. Plate, MR	MR-717	1
2-8	MH254182	Motor Prop B	24X-731	1
2-9	MH586563	Motor Prop C, w/bush	TD-7005	2
2-10	ZS424056	Screw, pan head 4x10		4
2-11	ZS272395	Motor Prop Retaining Screw, M-7	24X-732	1
2-12	ZS427026	Screw, countersunk head 4x10		2
2-13	SZ529108	Main Motor Fan	ND-7010	1
2-14	ZW270134	'E' Ring 5M	6-1-9	1
2-15x	ZW330412	Adjust. Washer (U) D4x13x0.13t		1
2-16x	ZW330423	Adjust. Washer (U) D4x13x0.25t		1
2-17	ZW330445	Adjust. Washer (U) D4x13x0.8t		1

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 2 ILLUSTRATION OF MAIN MOTOR BLOCK

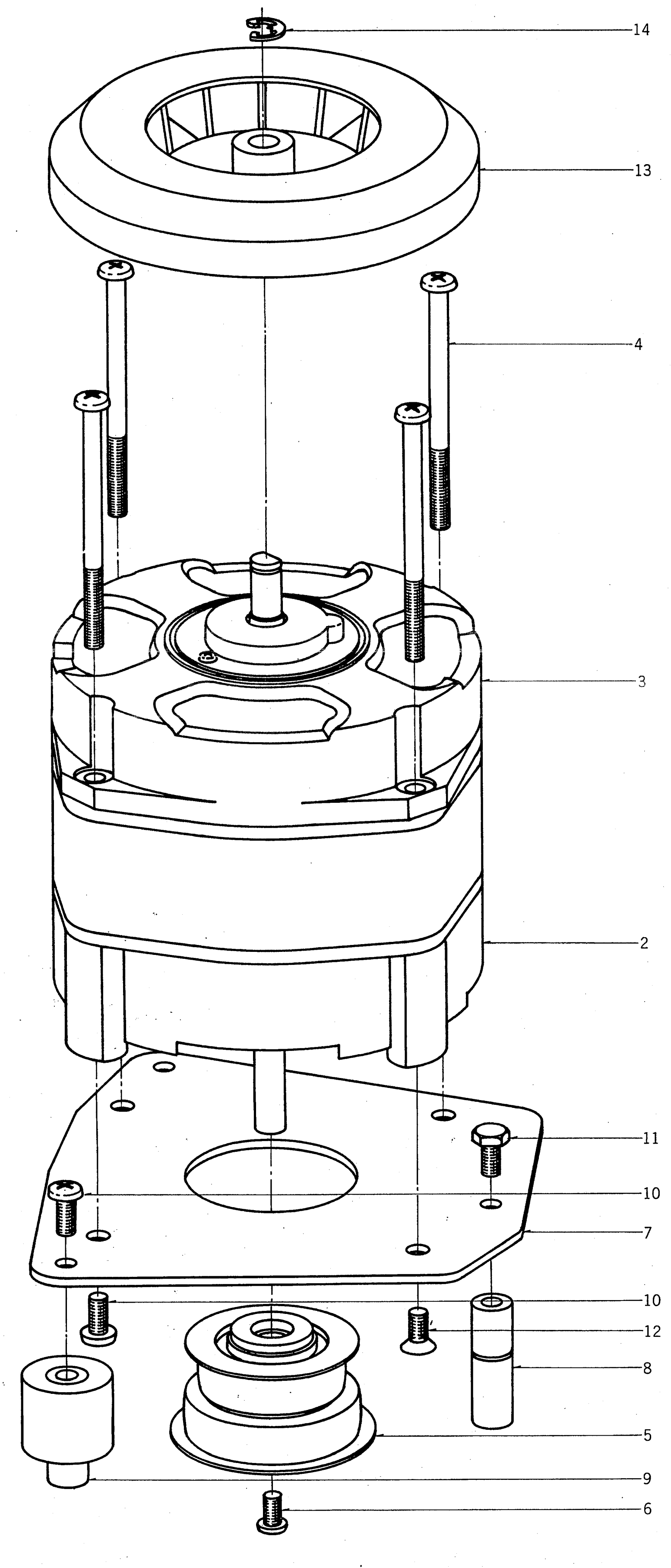
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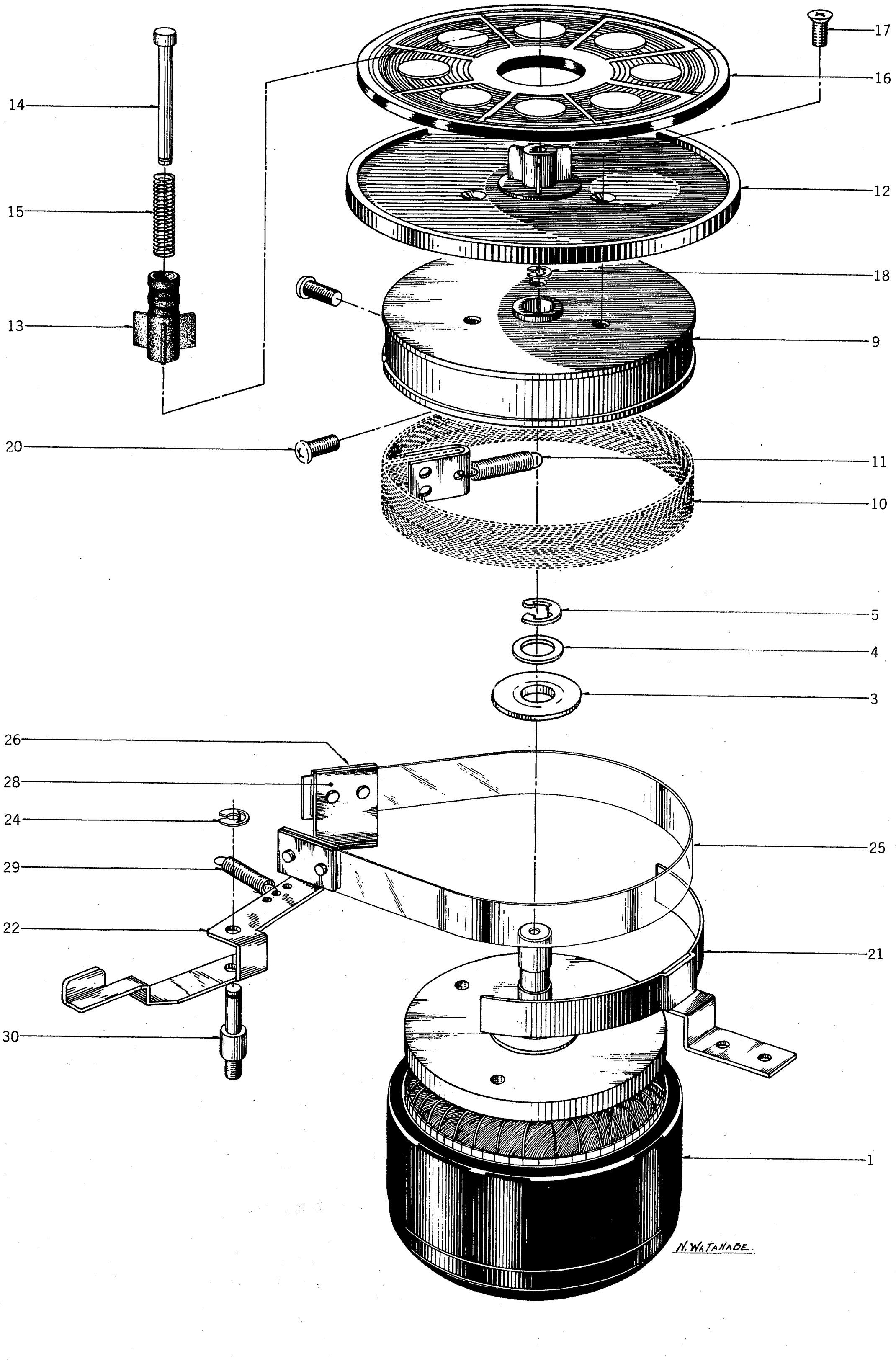
FIG. 3 ILLUSTRATION OF REEL MOTOR/REEL TABLE BLOCK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N. WATANABE.

REEL MOTOR/REEL TABLE BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
	REEL MOTOR BLOCK			
3-1	BM587518	Reel Motor Block Comp. 24XO-2	TD	1
3-2x	MV408510	Bearing 608VVMC2ERAV2L		1
3-3	MZ248185	Bearing Retainer	3R-758	1
3-4	ZW260278	Washer (Nylon) D8.1x13x0.5t		1
3-5	ZW270156	'E' Ring 6M	6-1-9	1
	REEL TABLE (R, L) BLOCK			
3-6x	BR587542	Reel Table Block Comp. (Supply)	TD	1
3-7x	BR587553	Reel Table Block Comp. (Take-up)	TD	1
3-8x	MT577473	Brake Drum (L) B	MR-216	1
3-9	MT576538	Brake Drum (R) B	MR-216	1
3-10	MT436860	Brake Cloth Comp.	MR-269	1
3-11	ZG317496	Felt Tension Spring	MR-260	1
3-12	MT534666	Reel Table	TW-2031	1
3-13	MT534677	Reel Clamper	TW-2032	1
3-14	MS342000	Reel Shaft	3R-108	1
3-15	ZG540617	Clamper Spring	TW-2096	1
3-16	MT534688	Reel Table Rubber	TW-2033	1
3-17	ZW413785	Screw, binding head 3x12		3
3-18	ZW270088	'E' Ring 1.9M	6-1-9	1
3-19x	ZW562476	Earth Lug M3		1
3-20	ZS435273	Screw, binding head 4x10		2
	MECH. ASSEMBLY BLOCK			
3-21	MZ581995	Brake Band Guide	TD-1014	2
3-22	ML582041	Brake Lever A (Take-up)	TD-1019	1
3-23x	ML533643	Brake Lever B (Supply)	TW-1030	1
3-24	ZW290283	'U' Ring 2.85M	6-1-1	2
3-25	MT314987	Brake Band	MR-213	2
3-26	MZ314998	Brake Band Retaining Plate	MR-212	4
3-27x	ZS413155	Screw, binding head 3x6		16
3-28	ML582074	Brake Band Support	TD-1023	2
3-29	ZG540090	Brake Lever Spring	TW-1058	2
3-30	MH581984	Brake Lever Post B	TD-1013	1

FLYWHEEL BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
4-1x	BF587520	Flywheel Block Comp.	TD-1, 3	1
4-2x	BF587531	Flywheel Block Comp. (PRO)	TD-2	1
4-3	MI296245	Flywheel 24	MH-202	1
4-4	MS581310	Capstan Shaft A	TD-2001	1
4-5x	MS581321	Capstan Shaft B (pro)	TD-2002	1
4-6	ZW437804	Flywheel Thrust AD7.9x13x1t	101024	1
4-7	ZS373577	Set Screw, hexagon Socket 5x6 (Flat/p.)		2
4-8	MZ413976	Main Case B 24 Comp.	1630-205	1
4-9x	MZ586798	Main Case Felt	A0415	1
4-10	MZ446635	Thrust Cap, Main Metal B2	LF-2006	1
4-11	MH244710	Flywheel Fixing Pin	900-250	1
4-12	MZ586438	Main Metal Cap Felt	A0414	1
4-13	SK581332	Main Case Cap	TD-2003	1
	MECH. ASSEMBLY BLOCK			
4-14	ZS416687	Screw, binding head 4x8		5
4-15	MV537862	Steel Ball D4		1
4-16	MZ453767	Thrust Bracket	BS-1022	1
4-17	ZW462205	Washer (Nylon) D7.9x1t (Without hole)		1
4-18	MH581916	Flywheel Prop	TD-1005	2
4-19	MB437703	Flywheel Belt, MCD113x7x1.6	MC-1015	1
4-20	MZ436847	Belt Guide	LF-1012	1
4-21	ZS322728	Screw, binding head 3x5		2
4-22	ZW330412	Adjust. Washer (U) D4x13x0.13t		1
4-23x	ZW330423	Adjust. Washer (U) D4x13x0.25t		1
4-24x	ZW413190	Adjust. Washer (U) D4x13x0.8t		1

FIG. 4 ILLUSTRATION OF FLYWHEEL BLOCK

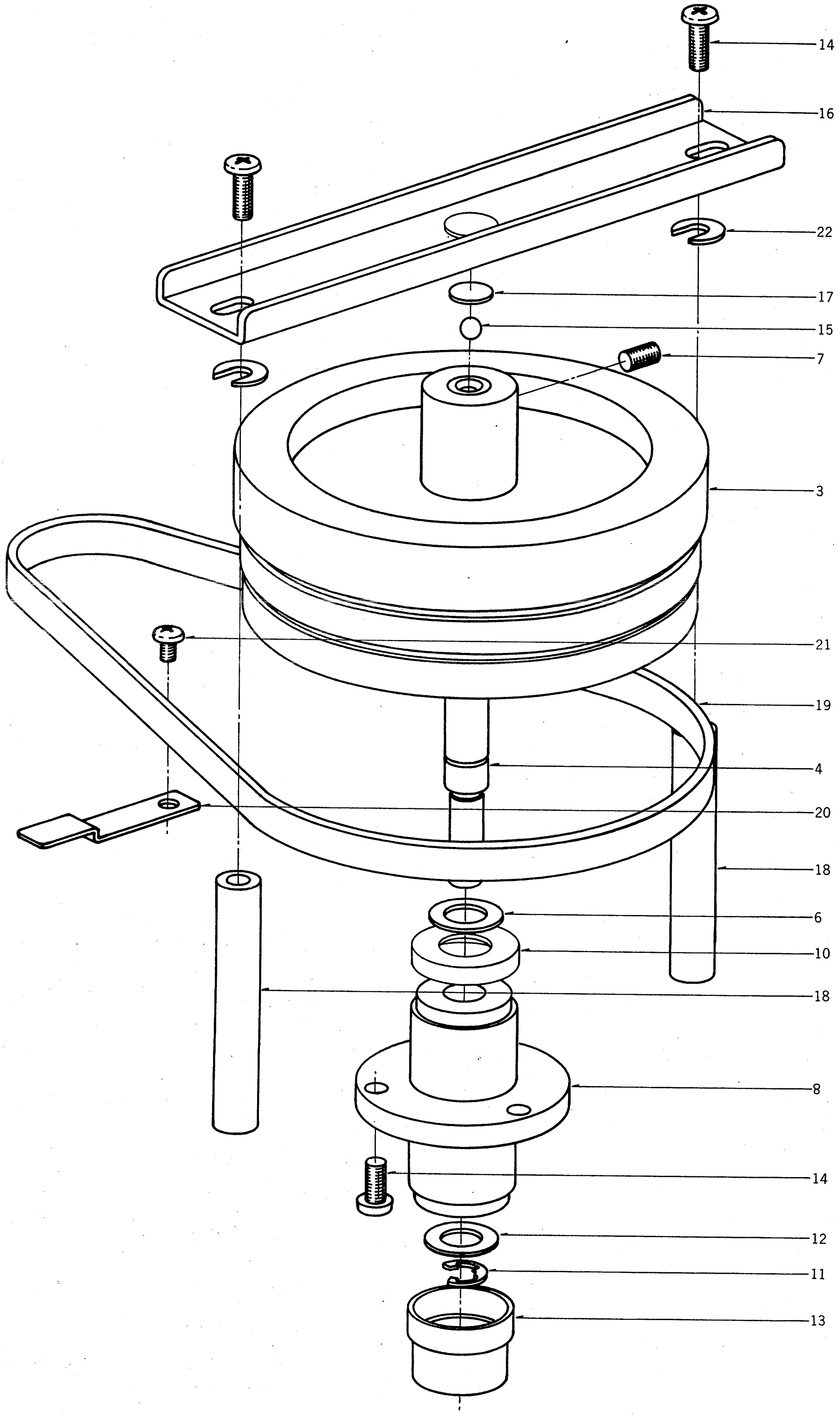
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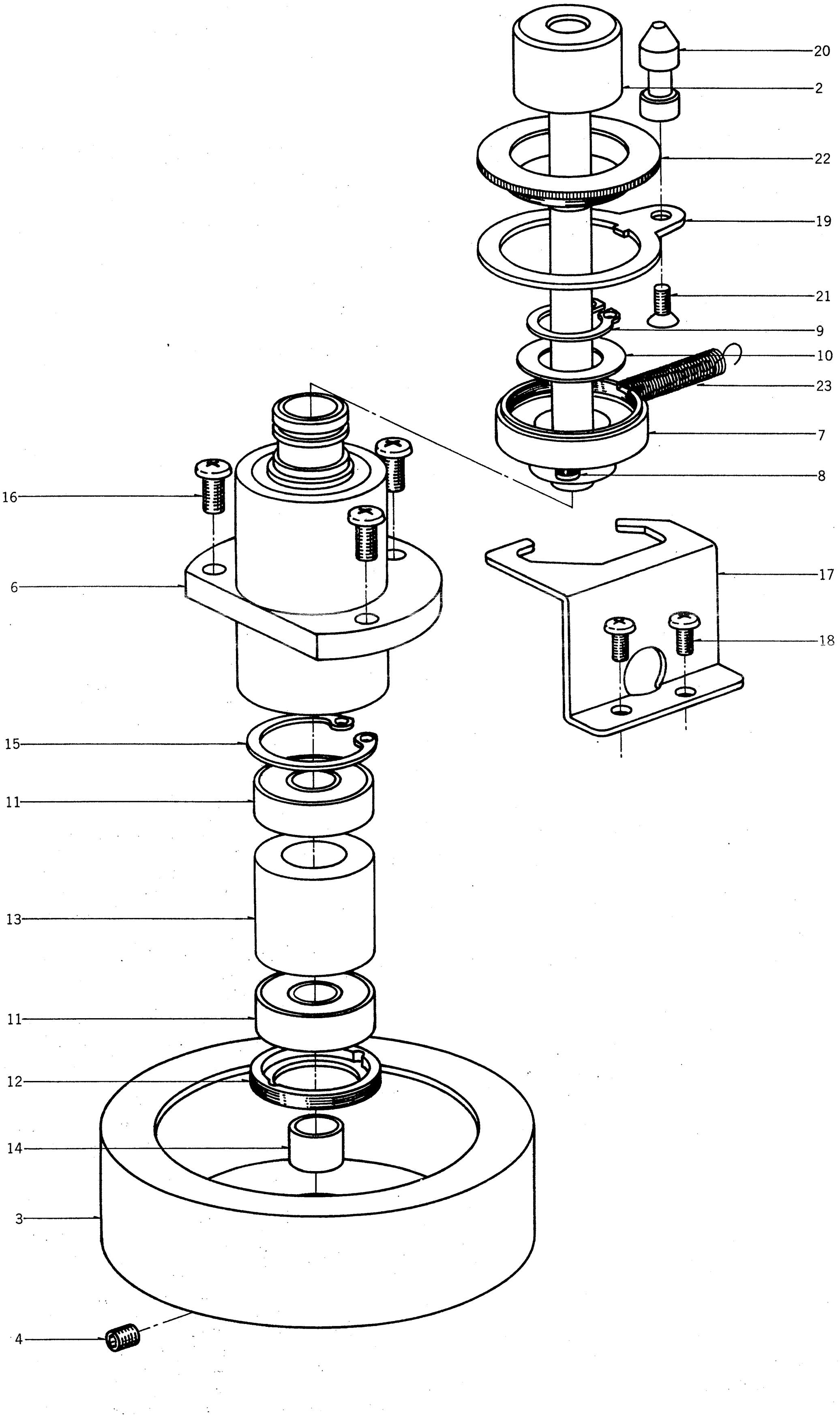
FIG. 5 ILLUSTRATION OF IMPEDANCE ROLLER BLOCK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IMPEDANCE ROLLER BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
5-1x	BI587755	Impedance Roller Block Comp.	TD	1
5-2	MS580386	Impedance Roller Shaft, w/roller	TD-2030	1
5-3	MI292678	Z Wheel	RD-245	1
5-4	ZS487912	Set Screw, hexagon Socket 5x6 (cup/p.)		2
5-5x	ZW321592	Washer (sus) D8.1x13x0.3t		1
5-6	BC580792	Impedance Case, w/shaft	TD-2080	1
5-7	MZ580634	Arm Holder	TD-2063	1
5-8	MZ596698	Stopper Pin Tube	TD-2100	1
5-9	ZW573546	'C' Ring (Shaft) STW-13		1
5-10	ZW584043	Thrust Washer	TD-2099	1
5-11	MV248141	Bearing 608VVMC2ERB32L		2
5-12	ZS292667	Z Bearing Screw	3A-215	1
5-13	MZ580836	Bearing Collar B	TD-2088	1
5-14	MZ580667	Bearing Collar A	TD-2066	1
5-15	ZW575684	'C' Ring (Hollow) RTW-22		1
	MECH. ASSEMBLY BLOCK			
5-16	ZS416687	Screw, binding head 4x8		3
5-17	MZ480015	Tension Arm Bracket	TD-1038	1
5-18	ZS413155	Screw, binding head 3x6		2
5-19	ML580004	Impedance Roller Arm	TD-1037	1
5-20	MS580454	Tension Arm Guide	TD-2038	1
5-21	ZS200305	Screw, countersunk head 3x5		1
5-22	SK580151	Arm Cap	TD-1053	1
5-23	ZG582232	Z Arm Spring	TD-1039	1

TENSION ARM BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
6-1x	BL587801	Tension Arm Block Comp.	TD	1
6-2	ML580443	Tension Arm Table, w/metal	TD-2037	1
6-3	MS580487	Tension Shaft	TD-2041	1
6-4	ZW580498	Tension Arm Washer	TD-2042	1
6-5	ZW575763	Washer (SPC) D8.1x13x0.5t		2
6-6	ZW260256	Washer (PBP) D8.1x13x0.1t		2
6-7	MH244710	Flywheel Fixing Pin	900-250	1
6-8	MH580588	Damper Prop.	TD-2052	1
6-9x	UM387617	Clutch Felt	CS-2011	1
6-10	MZ580577	Clutch Plate, w/metal A	TD-2051	1
6-11	ML580555	Clutch Lever, w/support	TD-2048	1
6-12	ZW270156	'E' Ring 6M	6-1-9	1
6-13	ZG580511	Clutch Spring	TD-2044	1
6-14	ZW580678	Spring Retaining Washer	TD-2067	2
6-15	ZW273756	Nut M3		2
6-16	ZW575774	Washer D4.5x9.8x0.7t		1
6-17	ZG580533	Cramp Spring	TD-2046	1
6-18	ZW410051	'E' Ring 2.5	6-1-9	1
6-19	ZG580522	Clutch Lever Spring	TD-2045	1
6-20	MZ580500	Switch Cam	TD-2043	1
6-21	ZG580746	Tension Spring	TD-2074	1
6-22	ZW550642	Washer (SPC) D3.1x7.9x0.5t		1
6-23	ZS323728	Screw, binding head 3x5		1
6-24	ML580465	Tension Arm	TD-2039	1
6-25	MS580454	Tension Arm Guide	TD-2038	1
6-26x	MZ810191	Cushion Rubber, RD	RD-278	1
6-27	ZS424124	Screw, countersunk head 3x5		1
	MECH. ASSEMBLY BLOCK			
6-28	ZW413190	Adjust. Washer (U) D4x13x0.8t		1
6-29x	ZW330423	Adjust. Washer (U) D4x13x0.25t		1
6-30x	ZW330412	Adjust. Washer (U) D4x13x0.13t		1
6-31	ZS413155	Screw, binding head 3x6		4
6-32	MH580691	Actuator Prop.	TD-2069	1
6-33	MZ580680	Actuator	TD-2068	1
6-34	ZW290283	'U' Ring 2.85M	6-1-1	1
6-35	ES562465	Micro SW. K-1	25-1-26	1
6-36	ZS417148	Screw, binding head 3x15		2
6-37	MH581905	Prop A	TD-1004	3
6-38	SZ535094	Decorative Washer	TW-2077	1
6-39	ZS575796	Screw, oval countersunk head 3x5		1

FIG. 6 ILLUSTRATION OF TENSION ARM BLOCK

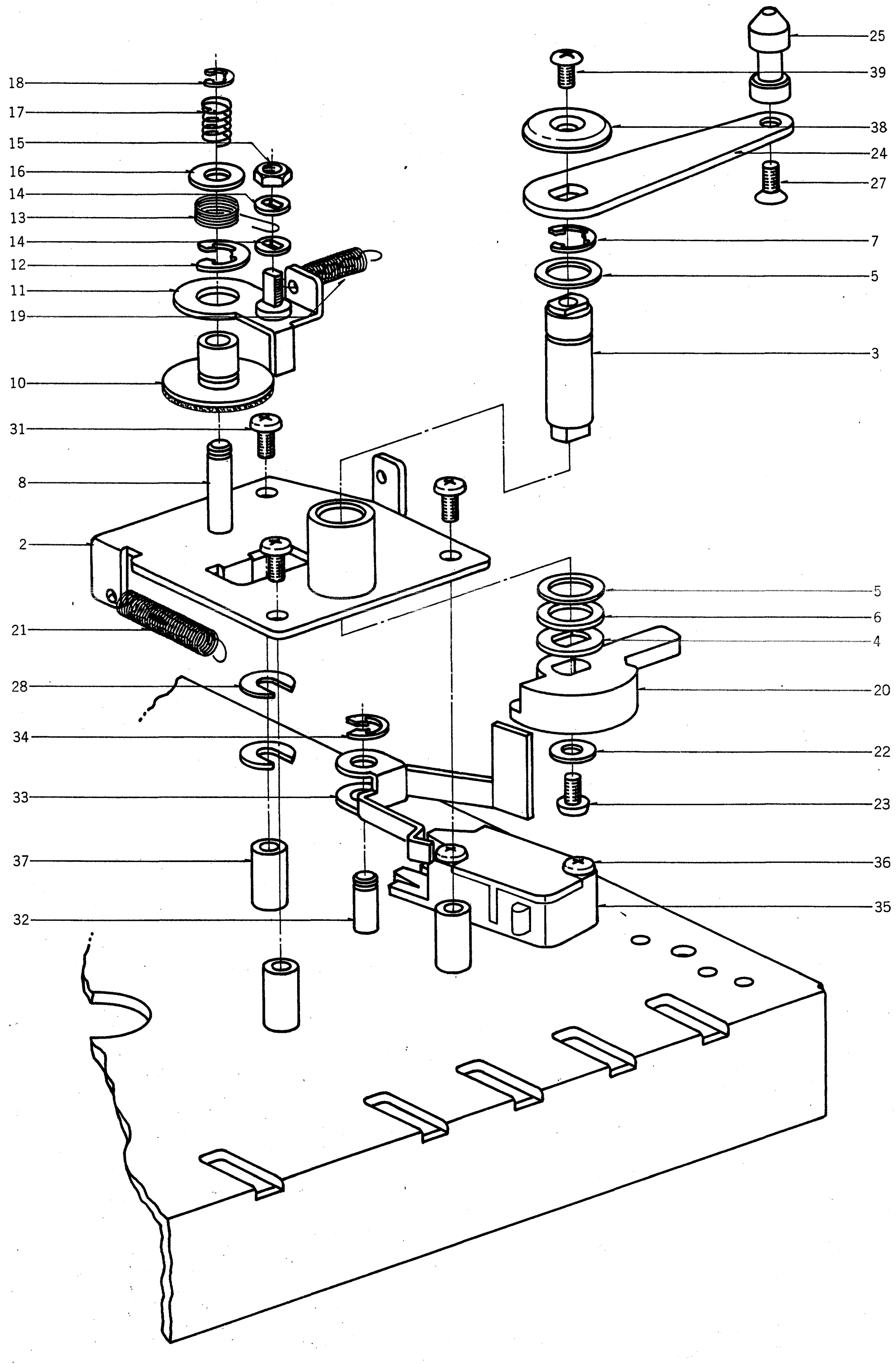
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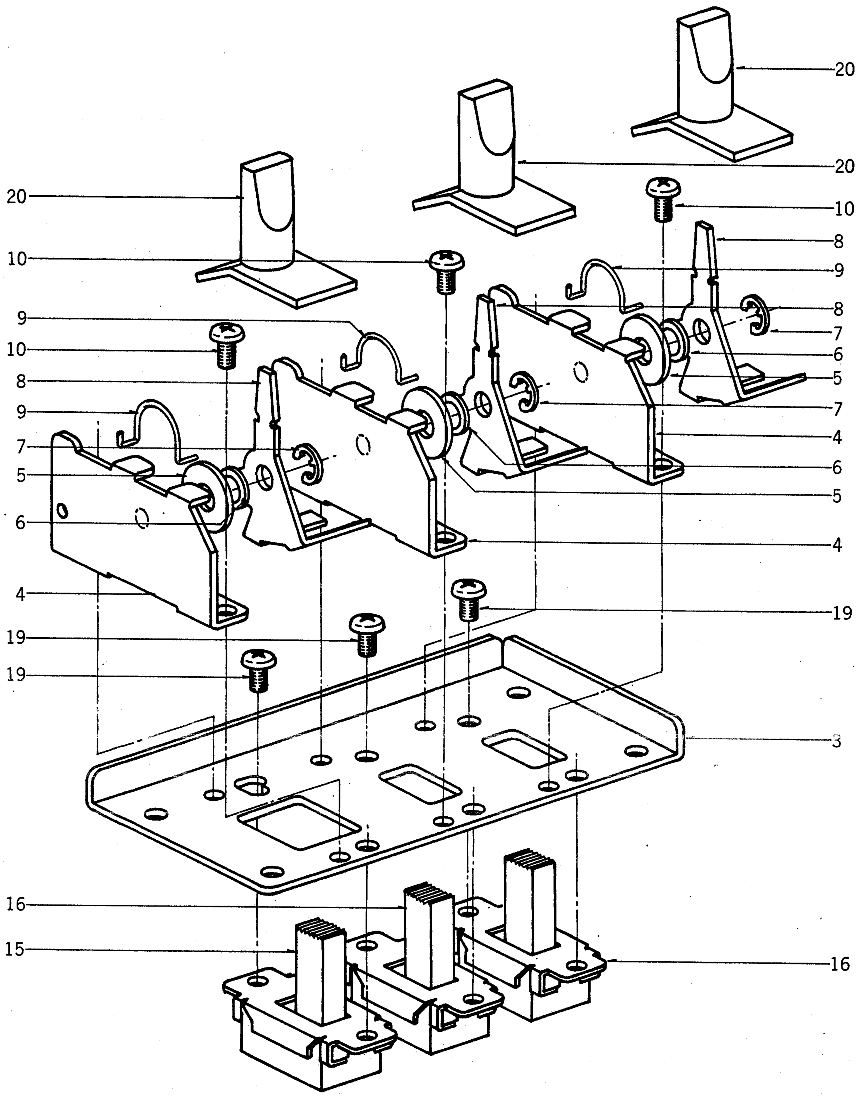
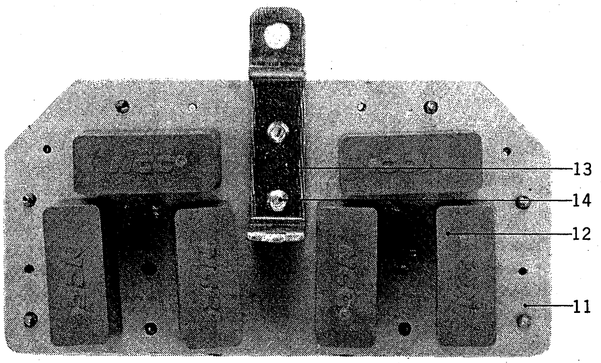
FIG. 7 ILLUSTRATION LEVER SW. BLOCK

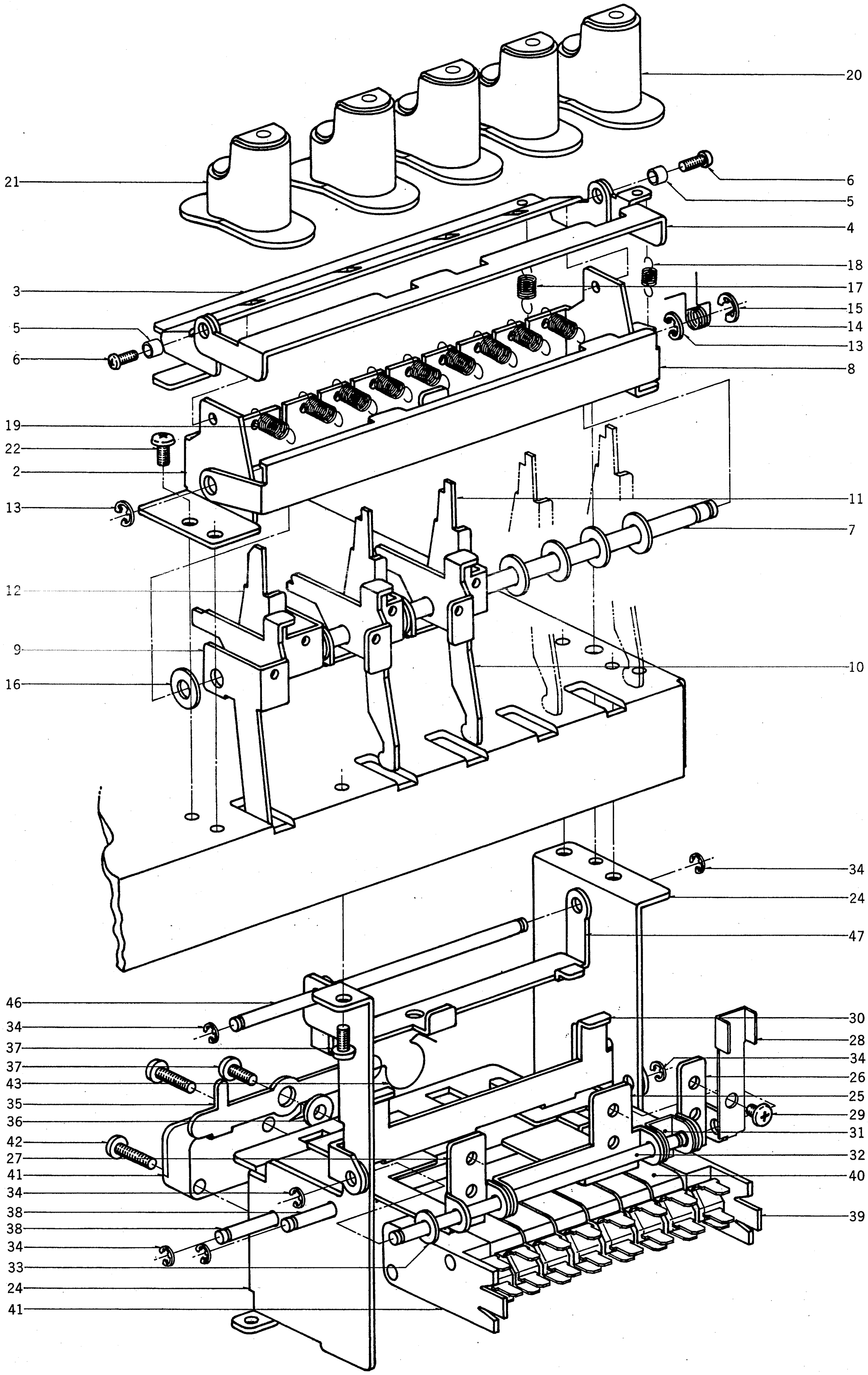




LEVER SW. BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
7-1x	BS587733	Lever SW. Block Comp.	TD	1
7-2x	BS587744	Lever SW. Block Comp. (EC)	TD	1
7-3	MZ580410	SW. Plate	TD-2033	1
7-4	MZ580397	Lever SW. Bracket	TD-2031	3
7-5	MZ421097	Washer D4.5x13x1t		3
7-6	ZW589893	Washer D4.1x7x0.4t		3
7-7	ZW270101	'E' Ring 3M	6-1-9	3
7-8	ML580408	SW. Lever	TD-2032	3
7-9	ZG580432	Turn Spring	TD-2036	3
7-10	ZS575752	Tapping Screw #2 3x5 (binding)		6
7-11	EA581782	Spark Quencher P.C. Board B	TD-2087	1
7-12	ER376435	Spark Quencher U/L $0.1\mu+120\Omega$ 250 WV	41-1-35	6
7-13	ML580847	P.C. Board Mt. Parts	TD-2089	1
7-14	ZS323728	Screw, binding head 3x5		2
7-15	ES479485	Slide SW. S-1	25-3-66	1
7-16	ES479496	Slide SW. S-2	25-3-67	1
7-17x	MZ580724	Power SW. Cover (EC)	TD-2072	1
7-18x	MZ580858	SW. Lever Cover (EC)	TD-2090	2
7-19	ZS371856	ISO Screw, binding head 3x5		4
7-20	SK581837	Amp Knob 1-B	CP-5018	3

FIG. 8 ILLUSTRATION OF OPERATION BLOCK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OPERATION BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
		OPERATION LEVER BLOCK		
8-1x	BL587564	Operation Lever Block Comp.	TD	1
8-2	ML581152	Operation Table	TD-2004	1
8-3	ML581163	Lock Plate A	TD-2005	1
8-4	ML581174	Lock Plate B	TD-2006	1
8-5	MZ580241	Lock Plate Bush	TD-2014	2
8-6	ZS464692	Screw, binding head 2.3x6		2
8-7	MS581343	Button Lever Shaft	TD-2008	1
8-8	ML581185	Lock Plate C	TD-2007	1
8-9	ML581354	Pause Lever	TD-2009	1
8-10	ML581365	Operation Lever A	TD-2010	4
8-11	ML580217	Button Lever A	TD-2011	4
8-12	ML580228	Button Lever B	TD-2012	1
8-13	ZW270101	'E' Ring 3M	6-1-9	2
8-14	ZG580230	Lock Plate C Spring	TD-2013	1
8-15	ZW290283	'U' Ring 2.85M	6-1-1	1
8-16	ZW562757	Washer D4.3x11x0.8t		11
8-17	ZG580252	Lock Plate A Spring	TD-2015	1
8-18	ZG580263	Lock Plate B Spring	TD-2016	1
8-19	ZG580285	Button Lever Spring	TD-2018	10
8-20	SB583244	Operation Button A	TD-6015	4
8-21	SB581578	Operation Button B (Blue)	TD-6015	1
8-22	ZS413155	Screw, binding head 3x6		4
		OPERATION SW. BLOCK		
8-23x	BK587575	Operation SW. Block Comp.	TD	1
8-24	MZ581196	SW. Holder	TD-2019	1
8-25	ML580296	FWD SW. Lever	TD-2020	1
8-26	ML580307	FF SW. Lever	TD-2021	1
8-27	ML580318	RWD SW. Lever	TD-2022	1
8-28	MZ580320	Cushion Plate	TD-2023	3
8-29	ZS481645	Screw, binding head 2.6x3		3
8-30	ML580331	Fast SW. Lever	TD-2024	1
8-31	ML580342	OP SW. Lever	TD-2025	1
8-32	MS580353	Micro SW. Shaft	TD-2026	1
8-33	ZW550642	Washer (SPC) D3.1x7.9x0.5t		7
8-34	ZW270088	'E' Ring 1.9M	6-1-9	8
8-35	ML580364	Seesaw Lever	TD-2027	1
8-36	MZ580375	SW. Bush	TD-2028	1
8-37	ZS413741	Screw, binding head 3x8		4
8-38	MS580353	Micro SW. Shaft	TD-2026	2
8-39	ES562465	Micro SW. K-1	25-1-26	1
8-40	ES573478	Micro SW. K-3	25-1-31	6
8-41	ES573456	Micro SW. K-2	25-1-30	2
8-42	ZS562432	Screw, binding head 3x13		2
8-43	ZG528928	Turn Spring B	ND-2042	1
8-44x	BA587586	Spark Quencher P.C. Board (A) (TD-2086) Comp.	TD	1
8-45x	ZS413155	Screw, binding head 3x6		3
8-46	MS583380	Release Lever Shaft	TD-2094	1
8-47	ML583367	Release Lever B	TD-2092	1

FIG. 9 ILLUSTRATION OF POWER SUPPLY BLOCK

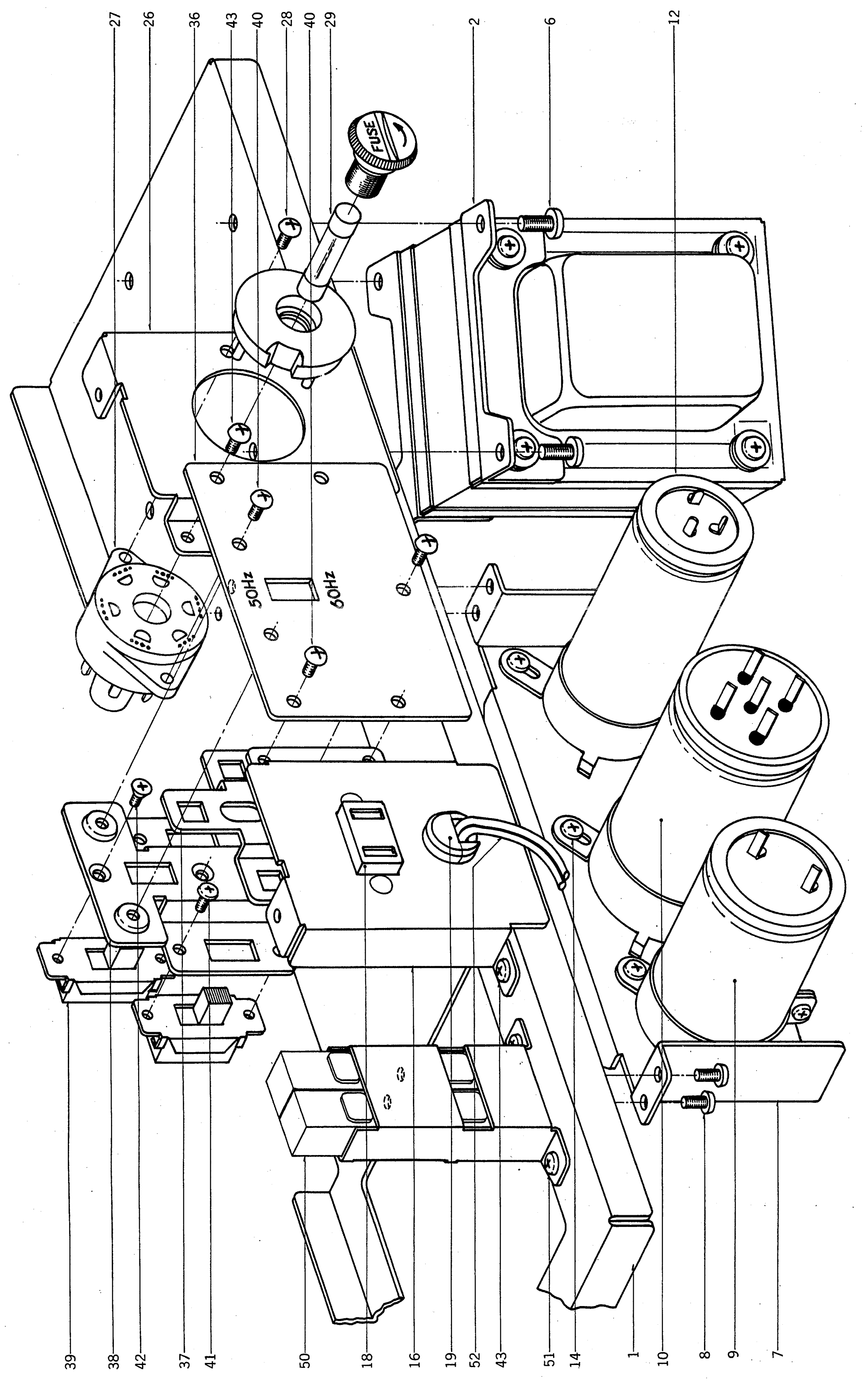
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FIG. 10 ILLUSTRATION OF MECHANISM ASSEMBLY BLOCK

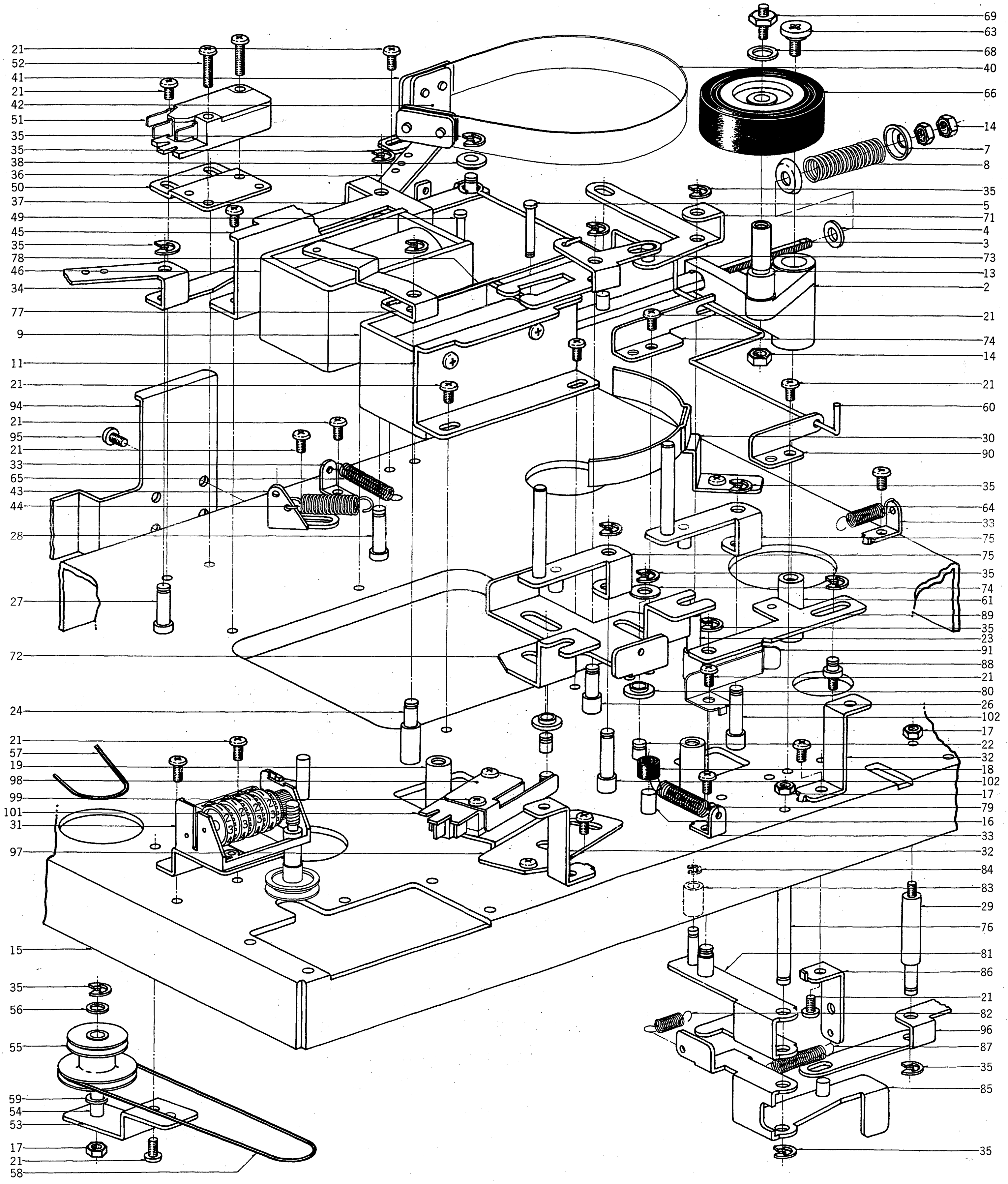
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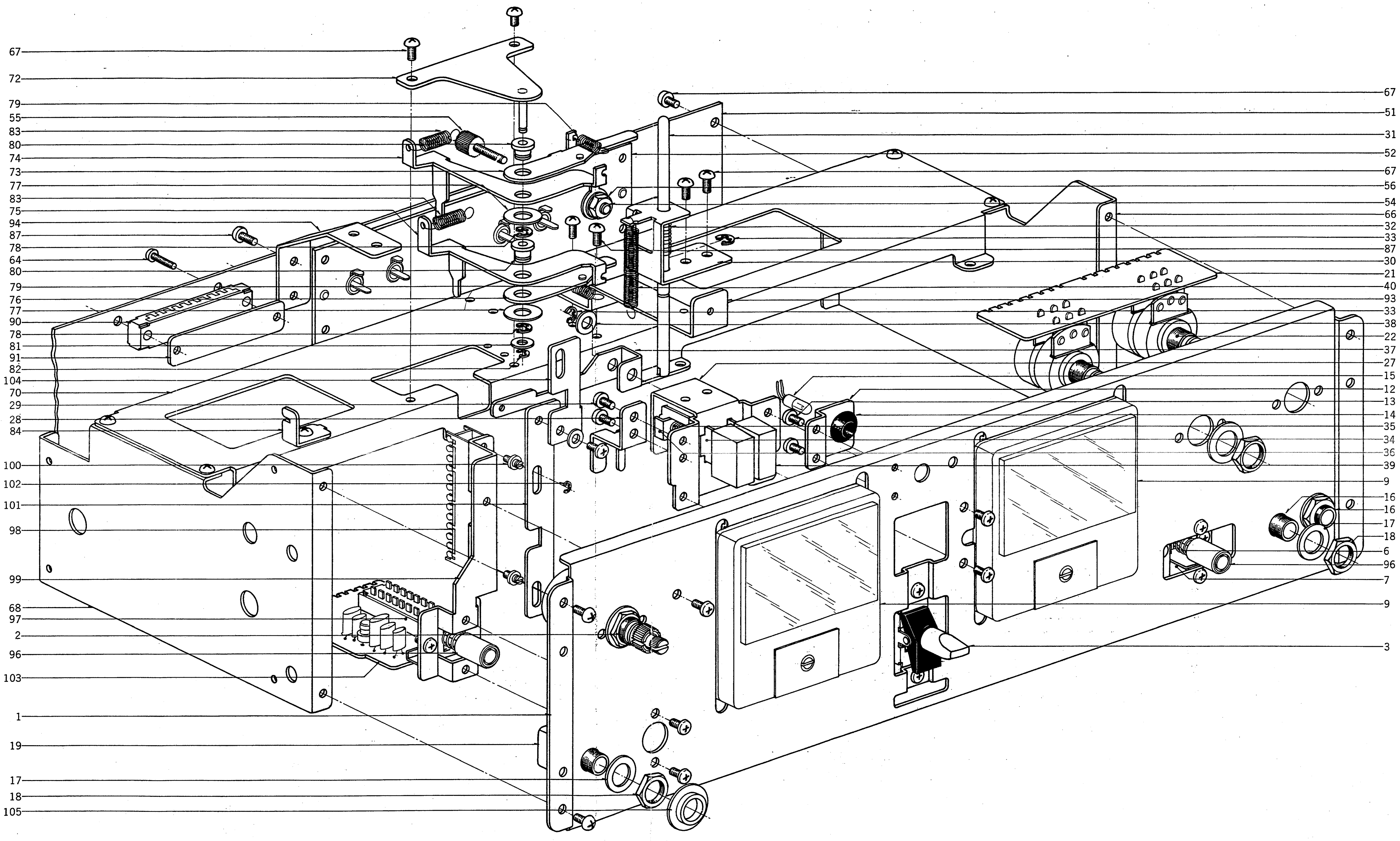
FIG. 11 ILLUSTRATION OF AMPLIFIER ASSEMBLY BLOCK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AMPLIFIER ASSEMBLY BLOCK

AMP. FRONT CHASSIS BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
11-1	EZ581387	Amp. Front Chassis	TD-5001	1
11-2	EV573660	Double/Vol. DJ20A B10kx2	36-3-53	1
11-3	ES565255	Lever SW. 12T-3S040 (Lead type)	25-12-11	1
11-4x	ES565446	Lever SW. S-J6398 (DB)	25-12-12	1
11-5x	ZS371856	ISO Screw, binding head 3x5		4
11-6	ES571094	Push SW. 1FST-2U-378-3	25-5-116	1
11-7	EZ549764	SW. Base B	TW-5306	1
11-8x	ZS323728	Screw, binding head 3x5		2
11-9	EM561756	VU Meter KL-250B-27 (Black)	46-1-79	2
11-10x	EM573748	VU Meter KL-280B-28 (Yellow)	46-1-86	2
11-11x	SE529457	Meter Mask	ND-5043	2
11-12	EZ549797	Lamp Holder	TW-5316	1
11-13	ZS447772	Tapping Screw #2 3x6(BR)		2
11-14	EZ428117	Rubber Bushing	AA-801	1
11-15	EL565468	Pilot Lamp (L/T) 24V 35MA (150M/Mx2)	28-2-24	1
11-16	EJ374016	Mic. Jack 2PMJ1	31-2-23	2
11-17	ZW272722	Toothed Lock Washer M9 D9.3x13x0.5t		3
11-18	ZW554624	E Jack Nut	7-1-56	3
11-19	EJ372892	Mic. Jack 3PMJ1	31-2-24	1

VOL. P.C. BOARD BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
11-20x	BA587946	Vol. P.C. Board Block Comp. (TD-5029)	TD	1
11-21	EA581760	Vol. P.C. Board	TD-5010	1
11-22	EV573682	Double/Vol. DJ60R A50kx2	36-3-54	2
11-23x	ER329308	Carbon/R. RD1/4 47k(J) (Insu. type)	35-9-5	4
11-24x	ER565301	Carbon/R. RD1/4 180k(J) (Insu. type)	35-9-5	2
11-25x	ER345756	Carbon/R. RD1/4 68k(J) (Insu. type)	35-9-5	2

REC. BUTTON BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
11-26x	BZ587935	Rec. Button Block	TD	1
11-27	EZ528333	Rec. SW. Holder, w/shaft	ND-5002	1
11-28	EZ528208	Safety Guard	ND-5010	1
11-29	ZS447772	Tapping Screw #2 3x6 (BR)		4
11-30	EZ528298	Rod Stand	ND-5008	1
11-31	EZ580915	Rec. Con Rod	TD-5015	1
11-32	ZG580882	Record Spring	TD-5009	1
11-33	ZW270101	'E' Ring 3M	6-1-9	2
11-34	EZ528322	SW. Slider	ND-5004	2
11-35	ZG528311	Coil Spring	ND-5005	2
11-36	EZ528300	Spring Retainer	ND-5006	1
11-37	EZ528467	Stopper	ND-5007	1
11-38	ZW420682	Washer (Nylon) D4.2x9x0.5t		1
11-39	SK528671	Push SW. Knob	ND-5011	2
11-40	ZG520716	RF Spring	3R-150	1

DOLBY/SOS SW. BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
11-41x	BS587957	Dolby/Sos. SW. Block Comp. (DB)	TD-3	1
11-42x	ES573693	Push SW. 2FST-6U-561-3	25-5-120	1
11-43x	EZ580972	SW. Base	TD-5020	1
11-44x	SE580983	Lamp Mask	TD-5021	1
11-45x	EZ580994	Lamp Holder	TD-5022	1
11-46x	EZ581005	Lamp Holder Support	TD-5023	1
11-47x	SB581016	Lamp Button A (Green)	TD-5024	1
11-48x	SB581027	Lamp Button B (Orange)	TD-5024	1
11-49x	EL565468	Pilot Lamp (L/T) 24V 35MA (150M/Mx2)	28-2-24	1
11-50x	ZS417137	Screw, binding head 3x4		2

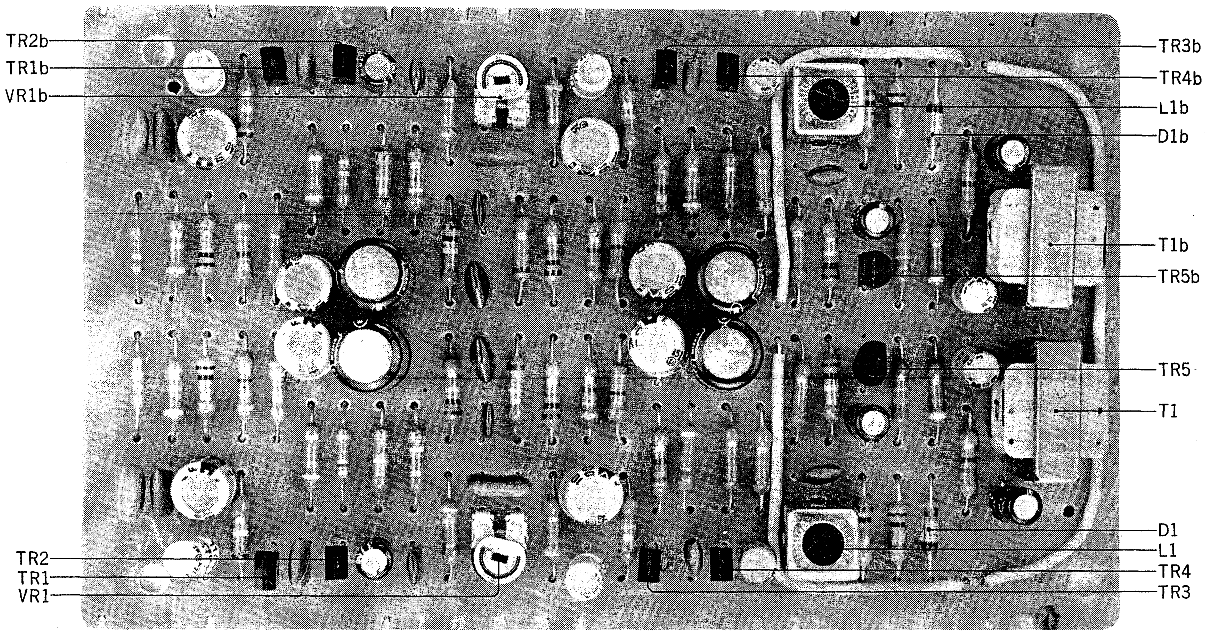
REAR SHASSIS BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
11-51	EZ529593	Amp. Rear Chassis	ND-5035	1
11-52	EJ581646	Jack Plate (3)	TD-5025	1
11-53x	EJ558246	5P Din Jack	31-1-99	1
11-54	EJ457661	Terminal A	55-5032	1
11-55	EJ457637	Terminal B	55-5033	1
11-56	ZW463410	ISO Nut #3 M5		1
11-57x	ZW463408	Toothed Lock Washer M5		1
11-58x	ZW463397	Earth Lug M5		1
11-59x	ER345712	Carbon/R. RD1/4 22k(J) (Insu. type)	35-9-5	4
11-60x	ER329264	Carbon/R. RD1/4 2.2k(J) (Insu. type)	35-9-5	2
11-61x	ER213647	Carbon/R. RD1/4 10k(J) (Insu. type)	35-9-5	4
11-63x	ZW273756	Nut M3		4
11-64	ZS575910	Screw, binding head 2.3x12		2
11-65x	ZW273688	Nut M2.3		2

AMP. ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
11-66	EZ528366	Amp. Side Plate (R)	ND-5020	1
11-67	ZS447772	Tapping Screw #2 3x6 (BR)		18
11-68	EZ528377	Amp. Side Plate (L)	ND-5020	1
11-69x	ZS523664	Tapping Screw #2 3x10(BR)		1
11-70	EZ581398	Center Bridge	TD-5002	1
11-71x	EJ328320	Nylon Clip HP-5N	2-7-39	1
11-72	EZ528276	Lever Retaining Plate, w/shaft	ND-5022	1
11-73	ML528851	Sub R Lever A	ND-5025	1
11-74	ML528873	Rec. Lever A	ND-5026	1
11-75	ML528884	Rec. Lever B	ND-5027	1
11-76	ML541484	Sub R Lever C	ND-5053	1
11-77	ZW379361	Washer (Nylon) D6.1x13x0.5t		2
11-78	ZW270123	'E' Ring 4M	6-1-9	2
11-79	ZG528423	Rec. Pull Spring A	ND-5028	2
11-80	ZW544083	Sleeve	ND-5055	2
11-81	ZW317171	Washer (PBP) D3.1x8x0.1t		3
11-82	ZW270088	'E' Ring 1.9M	6-1-9	1
11-83	ZG529683	Rec. Pull Spring B	ND-5029	2
11-84	EZ580893	P.C. Board Holder	TD-5011	4
11-85x	EZ581635	P.C. Board Angle A (Large)	TD-5013	1
11-86x	EZ580904	P.C. Board Angle B (Small)	TD-5014	1
11-87	ZS447772	Tapping Screw #2 3x6 (BR)		17
11-88x	EJ299823	Mate-N-Lock Cap Housing 6P 1-480276-0	52-1-2	1
11-89x	EJ373623	Pin Contact 61116-1	52-1-1	5
11-90	EJ292961	Multi-Jack 10P 500-010-005	31-4-4	1
11-91	EZ530021	Jack Nut Plate	ND-5052	1
11-92x	ZS462947	Screw, pan head 2.3x12		2
11-93	EZ528963	Am p. Supporting Plate A	ND-5040	1
11-94	EZ528952	Amp. Supporting Plate B	ND-5041	1
11-95x	ZS413155	Screw, binding head 3x6		2
11-96	SK531224	Push Button Knob	91-5051	2
11-97	ES573671	Push SW. 1FST-6U-122-3	25-5-119	1
11-98	ES574446	Slide SW. SSBO8223	25-3-101	1
11-99	EZ580871	SW. Mt. Parts	TD-5008	1
11-100	VM422381	Slide Plate Shaft	PX-A206	2
11-101	EZ580860	Speed SW. Lever	TD-5007	1
11-102	ZW357164	'E' Ring 2.3M	6-1-9	2
11-103	BA587913	SRT P.C. Board (B) Block	TD-5201	1
11-104	SZ580735	Speed Change Plate	TD-2073	1
11-105	EZ436217	Collar For Jack	MC-5006	3

FIG. 12 PHOTO OF P.B. P.C. BOARD (TD-5004) BLOCK

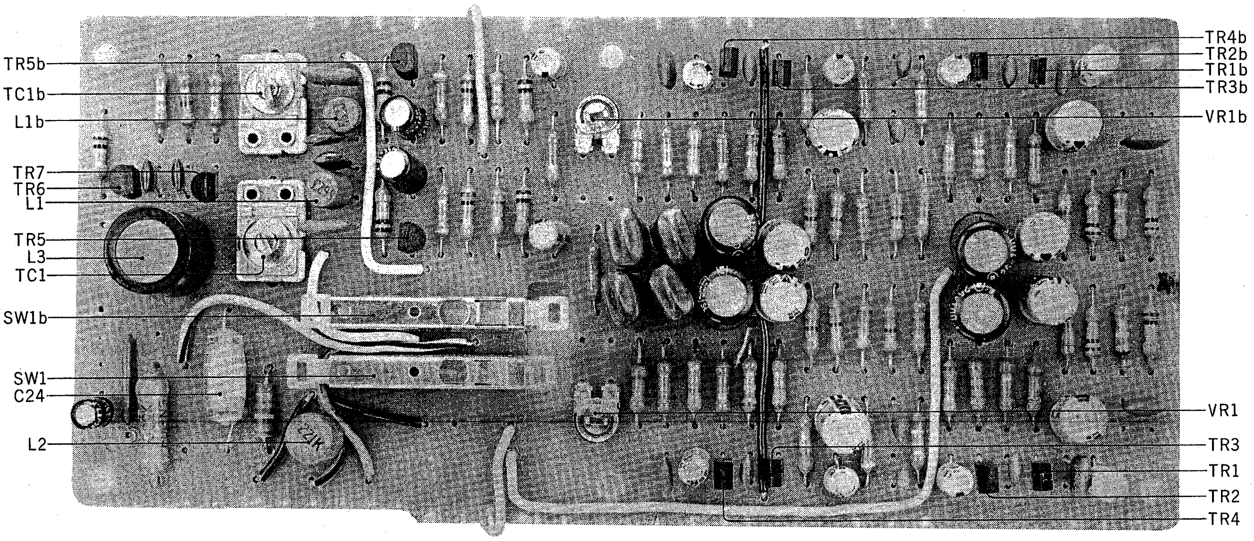


PB. P.C. BOARD (TD-5004) BLOCK

Symbol No.	Parts No.	Description	Q'ty
12-1x	BA587981	PB. P.C. Board Block Comp. (TD-5004)	1
12-TR1to4	ET234854	Transistor 2SC458LG(C)	8
12-TR5	ET453486	Transistor 2SC711(E)(F)	2
12-D1	ED219464	Germanium Diode 1N34A	2
12-VR1	EV464220	Semi-fixed/Vol. V8K4-1 50 kB	2
12-L1	EO346230	Inductor RX 22MH	2
12-T1	BT517274	Headphone Trans. N16-535S	2
		Capacitor, Vertical Type	
12-C1	EC220151	Elect. 100μF 25WV	2
12-C2	EC432810	Elect. 10μF 16WV	2
12-C3	EC467133	VFM 68PF(J) 50WV	2
12-C4	EC290520	VFM 100PF(J) 50WV	2
12-C5	EC336104	Elect. 100μF 6.3WV	2
12-C6	EC290520	VFM 100PF(J) 50WV	2
12-C7	EC320051	Elect. 10μF 16WV	2
12-C8	EC336104	Elect. 100μF 6.3WV	2
12-C9	EC392038	Mylar 0.018μF(J) 50WV	2
12-C10, 11	EC335373	Mylar 0.0022μF(J) 50WV	4
12-C12	EC220151	Elect. 100μF 25WV	2
12-C13	EC432810	Elect. 10μF 16WV NL	2
12-C14	EC329850	VFM 220PF(J) 50WV	2
12-C15	EC336104	Elect. 100μF 6.3WV	2
12-C16	EC399565	VFM 22PF(J) 50WV	2
12-C17	EC320051	Elect. 10μF 16WV	2
12-C18	EC336104	Elect. 100μF 6.3WV	2
12-C19	EC377212	VFM 47PF(J) 50WV	2
12-C20	EC450055	Elect. 1μF 25WV	2
12-C21	EC320051	Elect. 10μF 16WV	2
12-C22	EC450055	Elect. 1μF 25WV	2

Symbol No.	Parts No.	Description	Q'ty
		Resistor, Insulator Type	
12-R1	ER559067	Carbon RD1/4 330k(J)	2
12-R2	ER330063	Carbon RD1/4 47k(J)	2
12-R3	ER559067	Carbon RD1/4 330k(J)	2
12-R4	ER368111	Carbon RD1/4 10k(J)	2
12-R5	ER368076	Carbon RD1/4 330(J)	2
12-R6	ER330041	Carbon RD1/4 150k(J)	2
12-R7	ER368133	Carbon RD1/4 22k(J)	2
12-R8	ER364375	Carbon RD1/4 3.3k(J)	2
12-R9	ER575548	Carbon RD1/4 4.3k(J)	2
12-R10	ER330120	Carbon RD1/4 100k(J)	2
12-R11	ER575537	Carbon RD1/4 3.9k(J)	2
12-R12	ER364375	Carbon RD1/4 3.3k(J)	2
12-R13	ER368122	Carbon RD1/4 18k(J)	2
12-R14	ER337353	Carbon RD1/4 4.7k(J)	2
12-R15	ER330063	Carbon RD1/4 47k(J)	2
12-R16	ER337342	Carbon RD1/4 1k(J)	2
12-R17	ER368076	Carbon RD1/4 330(J)	2
12-R18	ER330052	Carbon RD1/4 2.2k(J)	2
12-R19	ER368177	Carbon RD1/4 82k(J)	2
12-R20	ER330052	Carbon RD1/4 2.2k(J)	2
12-R21	ER368076	Carbon RD1/4 330(J)	2
12-R22	ER575526	Carbon RD1/4 220(J)	2
12-R23	ER368133	Carbon RD1/4 22k(J)	2
12-R24	ER337342	Carbon RD1/4 1k(J)	2
12-R25	ER368111	Carbon RD1/4 10k(J)	2
12-R26	ER330120	Carbon RD1/4 100k(J)	2
12-R27	ER537388	Carbon RD1/4 68k(J)	2
12-R28	ER337353	Carbon RD1/4 4.7k(J)	2
12-R29	ER575550	Carbon RD1/4 750(J)	2

FIG. 13 PHOTO OF REC. & OSC. P.C. BOARD (TD-5003) BLOCK

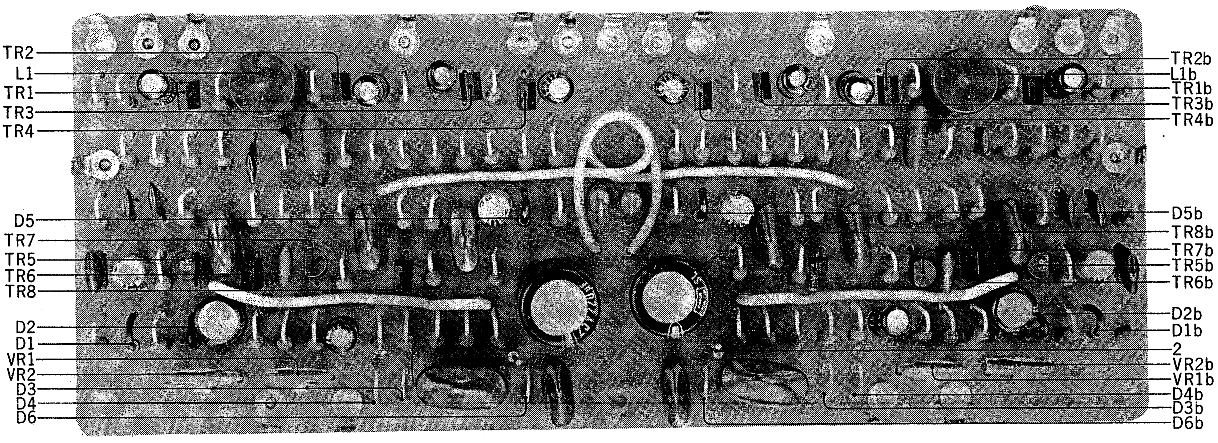


REC. & OSC. P.C. BOARD (TD-5003) BLOCK

Symbol No.	Parts No.	Description	Q'ty
13-1x	BA587968	Rec. & Osc. P.C. Board Comp. (TD-5003)	1
13-2x	BA587970	Rec. & Osc. P.C. Board Comp. (TD-5003) (DB)	1
13-TR1 to 4	ET234854	Transistor 2SC458LG(C)	8
13-TR5	ET453486	Transistor 2SC711(E) (F)	2
13-TR6, 7	ET495415	Transistor 2SC1211(D)	2
13-VR1	EV464207	Semi-fixed/Vol. V8K4-1 5 kB	2
13-TC1	EC398878	Trimmer/C. C-1P-2 70PF	2
13-L1	EO321254	Ferri Inductor FL7H 5.6MH(J)	2
13-L2	EO390622	Ferri Inductor FL9H 220μF(K)	1
13-L3	EO383365	Osc. Coil OT-204	1
13-L4	EO390622	Ferri Inductor FL9H 220μF(K)	1
13-SW1	ES520784	Slide SW. CL-104BO	2
		Capacitor, Vertical Type	
13-C1	EC290520	VFM 100PF(J) 50WV	2
13-C2	EC220151	Elect. 100μF 25WV	2
13-C3	EC432810	Elect. 10μF 16WV NL	2
13-C4	EC290520	VFM 100PF(J) 50WV	2
13-C5	EC336104	Elect. 100μF 6.3WV	2
13-C6, 7	EC399565	VFM 22PF(J) 50WV	4
13-C8	EC320051	Elect. 10μF 16WV	2
13-C9	EC336104	Elect. 100μF 6.3WV	2
13-C10	EC220151	Elect. 100μF 25WV	2
13-C11	EC377212	VFM 47PF(J) 50WV	2
13-C12	EC320051	Elect. 10μF 16WV	2
13-C13	EC336104	Elect. 100μF 6.3WV	2
13-C14	EC399565	VFM 22PF(J) 50WV	2
13-C15	EC290520	VFM 100PF(J) 50WV	2
13-C16	EC336104	Elect. 100μF 6.3WV	2
13-C17	EC320051	Elect. 10μF 16WV	2
13-C18, 19	EC333562	Mylar 0.18μF(K) 50WV	4
13-C20	EC320051	Elect. 10μF 16WV	2
13-C21	EC220994	Elect. 10μF 25WV	2
13-C22	EC380621	Mylar 0.0068μF(J) 50WV	2
13-C23	EC389237	VFM 200PF(J) 50WV	2
13-C24	EC573636	Plastic Film 620PF(J) 500WV	1
13-C25, 26	EC250841	Mylar 0.01μF(J) 50WV	2
13-28	EC450527	Elect. 4.7μF 25WV	1
13-29	EC336115	Elect. 220μF 25WV	1

Symbol No.	Parts No.	Description	Q'ty
		Resistor, Insulator Type	
13-R1	ER368111	Carbon RD1/4 10k(J)	2
13-R2	ER559067	Carbon RD1/4 330k(J)	2
13-R3	ER368111	Carbon RD1/4 10k(J)	2
13-R4	ER558606	Carbon RD1/4 680(J)	2
13-R5	ER330041	Carbon RD1/4 150k(J)	2
13-R6	ER330052	Carbon RD1/4 2.2k(J)	2
13-R7	ER368122	Carbon RD1/4 18k(J)	2
13-R8	ER337397	Carbon RD1/4 2.7k(J)	2
13-R9	ER575616	Carbon RD1/4 1.6k(J)	2
13-R10	ER368122	Carbon RD1/4 18k(J)	2
13-R10	ER368133	Carbon RD1/4 22k(J) (DB)	2
13-R11	ER476313	Carbon RD1/2 220(J)	2
13-R12	ER337353	Carbon RD1/4 4.7k(J)	2
13-R13	ER537366	Carbon RD1/4 120k(J)	2
13-R14	ER575605	Carbon RD1/4 8.2k(J)	2
13-R15	ER558584	Carbon RD1/4 270(J)	2
13-R16	ER368177	Carbon RD1/4 82k(J)	2
13-R18	ER330164	Carbon RD1/4 1.8k(J)	2
13-R19	ER575550	Carbon RD1/4 750(J)	2
13-R20	ER368133	Carbon RD1/4 22k(J)	2
13-R21	ER575594	Carbon RD1/4 36k(J)	2
13-R22	ER558573	Carbon RD1/4 27k(J)	2
13-R23	ER364375	Carbon RD1/4 3.3k(J) (DB)	2
13-R24	ER368098	Carbon RD1/4 1.2k(J) (DB)	2
13-R25	ER330052	Carbon RD1/4 2.2k(J)	2
13-R26	ER558573	Carbon RD1/4 27k(J)	2
13-R27	ER368111	Carbon RD1/4 10k(J)	2
13-R28	ER337342	Carbon RD1/4 1k(J)	2
13-R29	ER337353	Carbon RD1/4 4.7k(J)	2
13-R30	ER368111	Carbon RD1/4 10k(J)	2
13-R31	ER368087	Carbon RD1/4 470(J)	1
13-R32, 33	ER575583	Carbon RD1/4 3.3(J)	2
13-R34	ER368111	Carbon RD1/4 10k(J)	1
13-R35	ER426892	Solid RC1/2 2.4k(J)	1
13-R38	BZ483287	Metal Oxide Film 2W 100(K)	1
13-R39	ER552802	Carbon RD1/2 100(J)	1

FIG. 14 PHOTO OF DOLBY P.C. BOARD (TD-5301) BLOCK

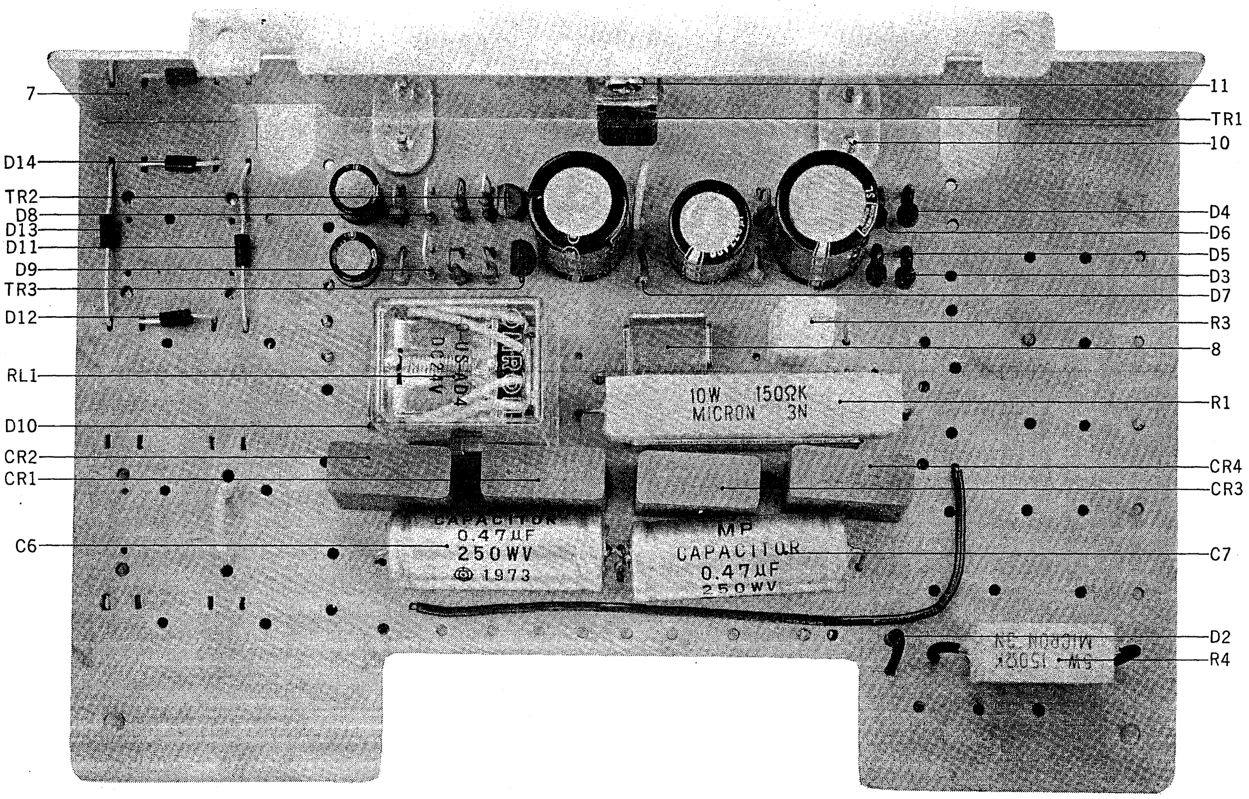


DOLBY P.C. BOARD (TD-5301) BLOCK

Symbol No.	Parts No.	Description	Q'ty
14-1x	BA588003	Dolby P.C. Board Comp. (TD-5301)	1
14-TR1	ET234854	Transistor 2SC458LG(C)	2
14-TR2	ET329218	Transistor 2SC458(C)	2
14-TR3	ET352146	Transistor 2SC458LG(D)	2
14-TR4	ET329218	Transistor 2SC458(C)	2
14-TR5	ET391051	FET 2SK30A(GR)	2
14-TR6	ET234854	Transistor 2SC458LG(C)	2
14-TR7	ET350335	Transistor 2SA564(Q)	2
14-TR8	ET329218	Transistor 2SC458(C)	2
14-D1	ED219464	Germanium Diode 1N34A	2
14-D2	ED491130	Zener Diode WZ-085	2
14-D3, 4	ED560913	Silicon Diode 1S2473 VE	4
14-D5	ED219464	Germanium Diode 1N34A	2
14-D6	ED560913	Silicon Diode 1S2473 VE	2
14-VR1	EV523620	Semi-Fixed/Vol. V8K4-1 500 ΩB	2
14-VR2	EV464207	Semi-Fixed/Vol. V8K4-1 5 kB	2
14-L1	EO496350	Inductor 146LY 36 MH(J)	2
14-2	EJ363126	P.C.Board Terminal	2
		Capacitor, Vertical Type	
14-C1	EC320051	Elect. 10μF 16WV	2
14-C2	EC350875	Mylar 0.001μF(J) 50WV	2
14-C3	EC336194	VFM 270PF(J) 50WV	2
14-C4, 5,6	EC320051	Elect. 10μF 16WV	6
14-C7	EC313121	Elect. 220μF 25WV	2
14-C8	EC329883	Mylar 0.0056μF(J) 50WV	2
14-C9	EC329861	Mylar 0.027μF(J) 50WV	2
14-C10	EC337500	Mylar 0.0047μF(J) 50WV	2
14-C11	EC320051	Elect. 10μF 16WV	2
14-C12	EC379170	Mylar 0.1μF(J) 50WV	2
14-C13	EC320040	Elect. 47μF 16WV	2
14-C14	EC290520	VFM 100PF(J) 50WV	2
14-C15	EC320051	Elect. 10μF 16WV	2
14-C16	EC379170	Mylar 0.1μF(J) 50WV	2
14-C17	EC320051	Elect. 10μF 16WV	2
14-C18,19	EC379170	Mylar 0.1μF(J) 50WV	4
14-C20	EC395504	Mylar 0.33μF(K) 50WV	2

Symbol No.	Parts No.	Description	Q'ty
		Resistor, Stopper Type	
14-R1	ER419556	Carbon RD1/4 43k(J)	2
14-R2	ER336442	Carbon RD1/4 10k(J)	2
14-R3	ER306887	Carbon RD1/4 15k(J)	2
14-R4	ER346601	Carbon RD1/4 47k(J)	2
14-R5	ER429996	Carbon RD1/4 470k(J)	2
14-R6	ER212477	Carbon RD1/4 3.3k(J)	2
14-R7	ER304402	Carbon RD1/4 470(J)	2
14-R8	ER212264	Carbon RD1/4 22k(J)	2
14-R9	ER336442	Carbon RD1/4 10k(J)	2
14-R10	ER343078	Carbon RD1/4 2.7k(J)	2
14-R11	ER349907	Carbon RD1/4 33k(J)	2
14-R12	ER397570	Carbon RD1/4 150k(J)	2
14-R13	ER212174	Carbon RD1/4 180k(J)	2
14-R14	ER212264	Carbon RD1/4 22k(J)	2
14-R15	ER357570	Carbon RD1/4 150k(J)	2
14-R16	ER212264	Carbon RD1/4 22k(J)	2
14-R17	ER349942	Carbon RD1/4 8.2k(J)	2
14-R18	ER343078	Carbon RD1/4 2.7k(J)	2
14-R19	ER458728	Carbon RD1/2 100(J)	2
14-R20,21	ER349907	Carbon RD1/4 33k(J)	4
14-R22	ER357535	Carbon RD1/4 39k(J)	2
14-R23	ER212477	Carbon RD1/4 3.3k(J)	2
14-R24	ER349942	Carbon RD1/4 8.2k(J)	2
14-R25	ER306843	Carbon RD1/4 1.2k(J)	2
14-R26	ER430097	Carbon RD1/4 680k(J)	2
14-R27	ER357456	Carbon RD1/4 2.2k(J)	2
14-R28	ER306887	Carbon RD1/4 15k(J)	2
14-R29to31	ER349942	Carbon RD1/4 8.2k(J)	6
14-R32	ER336442	Carbon RD1/4 10k(J)	2
14-R33	ER349907	Carbon RD1/4 33k(J)	2
14-R34	ER450011	Carbon RD1/4 120k(J)	2
14-R35	ER346601	Carbon RD1/4 47k(J)	2
14-R36	ER343078	Carbon RD1/4 2.7k(J)	2
14-R37	ER211465	Carbon RD1/4 1k(J)	2
14-R38	ER380913	Carbon RD1/4 33(J)	2
14-R39	ER361642	Carbon RD1/4 47(J)	2
14-R40	ER306887	Carbon RD1/4 15k(J)	2
14-R41,42	ER426857	Carbon RD1/4 270k(J)	4
14-R43	ER380711	Carbon RD1/4 220k(J)	2

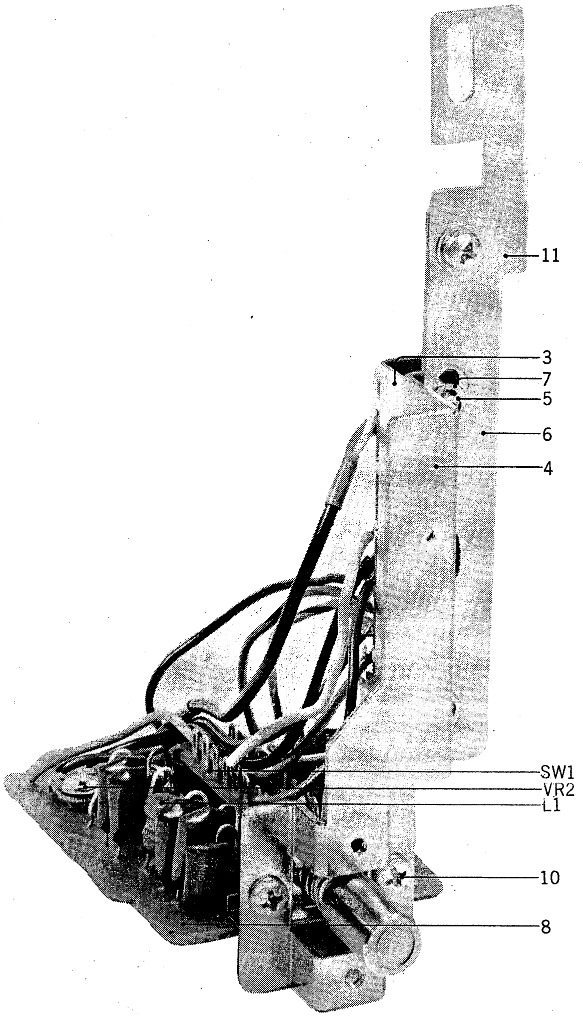
FIG. 15 PHOTO OF POWER SUPPLY P.C. BOARD (TD-2060) BLOCK



POWER SUPPLY P.C. BOARD (TD-2060) BLOCK

Symbol No.	Parts No.	Description	Q'ty
15-1x	BA587698	Power Supply P.C. Board Comp. (TD-2060)	1
15-2x	BA589847	Power Supply P.C. Board Comp. (TD-2060)(UL)	1
15-3x	BA587711	Power Supply P.C. Board Comp. (TD-2060)(EC,JPN)	1
15-4x	BA587700	Power Supply P.C. Board Comp. (TD-2060) (pro)	1
15-5x	BA589858	Power Supply P.C. Board Comp. (TD-2060) (pro-UL)	1
15-6x	BA587722	Power Supply P.C. Board Comp. (TD-2060) (pro-EC, JPN)	1
15-TR1	ET517375	Transistor 2SD360(D)(E)	1
15-TR2, 3	ET453486	Transistor 2SC711(E)(F)	2
15-D2	ED224550	Silicon Diode 10D4	1
15-D3 to 6	ED494583	Silicon Diode 10D05	4
15-D7	ED511918	Zener Diode WZ-240	1
15-D8 to 10	ED560913	Silicon Diode 1S2473 VE	3
15-D11 to 14	ED224550	Silicon Diode 10D4	4
15-RL1	EP344136	Relay MY4-0-US-AD4 24V	1
15-CR1 to 4	ER376435	Spark Quencher U/L 0.1μ+120Ω 250WV	4
15-7	EZ581624	Heat-sink Plate	1
15-8	EZ580623	Cement/R. Base	1
15-9x	ZS413155	Screw, binding head 3x6	2
15-10	ZS447840	Tapping Screw #2 3x8(BR)	2
15-11	ZS413741	Screw, binding head 3x8	1
15-12x	ZW273756	Nut M3	1
15-13x	EJ580825	Fuse Hodler	14
15-14x	EZ581804	Insulator Barrier 2	1
		Capacitor, Vertical Type	
15-C1	EC403468	Elect. 330μF 50WV	1
15-C2	EC372148	Elect. 220μF 35WV	1
15-C3	EC331817	Elect. 470μF 25WV	1
15-C4, 5	EC220612	Elect. 33μF 25WV	2
15-C6, 7	EC350987	MP 0.47μF(M) 250VAC(Tub. type)	2
		Resistor, Stopper Type	
15-R1	ER573524	Cement 10W 150(K) (Wire-wound type)	1
15-R3	ER535948	Cement 5W 10(K)	1
15-R4	ER573715	Cement 5W 150(K) (Wire-wound type)	1
15-R5	ER306843	Carbon RD1/4 1.2k(J)	1
15-R6	ER211667	Carbon RD1/4 100(J)	2
15-R8	ER211465	Carbon RD1/4 1k(J)	1
15-R9	ER336442	Carbon RD1/4 10k(J)	1
15-R10	ER380711	Carbon RD1/4 220k(J)	1
15-R11	ER211667	Carbon RD1/4 100(J)	1
15-R12	ER362485	Carbon RD1/4 330k(J)	1
15-R13	ER212883	Carbon RD1/4 4.7k(J)	1

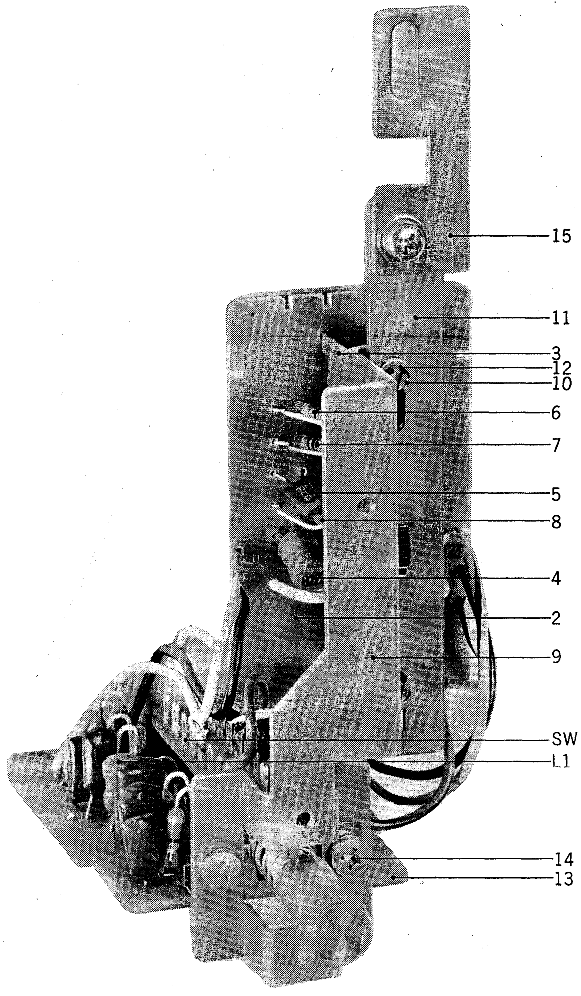
FIG. 16 PHOTO OF SPEED CHANGE/SRT P.C. BLOCK



SPEED CHANGE/SRT P.C. BLOCK

Symbol No.	Parts No.	Description	Q'ty
		SPEED CHANGE SW. P.C. BLOCK	
16-1x	BA587878	Speed Change SW. P.C. Block Comp.	1
16-2x	BA587891	Speed Change SW. P.C. Block Comp. (DB)	1
16-3	ES574446	Slide SW. SSBO8223	1
16-4	EZ580871	SW. Retaining Parts	1
16-5	VM422381	Slide Plate Shaft	2
16-6	EZ580860	Speed SW. Lever	1
16-7	ZW357164	'E' Ring 2.3M	2
16-8	BA587913	SRT P.C. Board B(TD-5201) Comp.	1
16-9x	BA587924	SRT P.C. Board B(TD-5201) Comp. (DB)	1
16-10	ZS371856	ISO Screw, binding head 3x5	2
16-11	SZ580735	Speed Change Plate	1
		SRT P.C. BOARD B (TD-5201) BLOCK	
16-8	BA587913	SRT P.C. Board B (TD-5201) Comp.	1
16-9x	BA587924	SRT P.C. Board B (TD-5201) Comp. (DB)	1
16-SW1	ES573671	Push SW. 1FST-6U-122-3	1
16-VR1, 2	EV522797	Semi-Fixed/Vo. V8K4-1 20kB (DB)	1
16-L1	EO369178	Ferri Inductor FL7H 1.5MH(J)	2
		Capacitor, Vertical Type	
16-C1	EC329861	Mylar 0.027μF(J) 50WV	2
16-C2	EC379214	Mylar 0.047μF(J) 50WV	2
16-C3	EC368335	Mylar 0.022μF(J) 50WV	2
16-C4	EC379214	Mylar 0.047μF(J) 50WV	2
16-C5	EC379192	Mylar 0.039μF(J) 50WV	2
		Resistor, Stopper Type	
16-R1	ER349784	Carbon RD1/4 390(J)	2
16-R2	ER213120	Carbon RD1/4 56(J)	2
16-R3	ER362441	Carbon RD1/4 1.8k(J)	2
16-R4	ER406923	Carbon RD1/4 75(J)	2
16-R5	ER380913	Carbon RD1/4 33(J)	2
16-R6	ER430053	Carbon RD1/4 22(J)	2

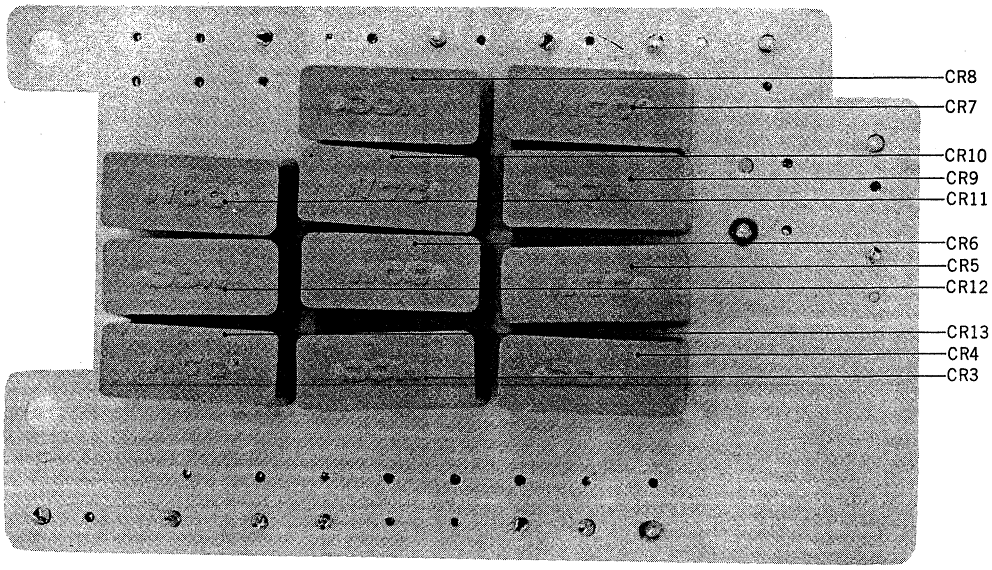
FIG. 17 PHOTO OF SPEED CHANGE/SRT P.C. BLOCK (PRO)



SPEED CHANGE/SRT P.C. BLOCK (PRO)

Symbol No.	Parts No.	Description	Q'ty
		SPEED CHANGE SW. P.C. BLOCK	
17-1x	BA587880	Speed Change SW. P.C. Block Comp. (PRO)	1
17-2	EA581758	Speed Change SW. P.C. Board	1
17-3	ES520672	Slide SW. SL-282B4	1
17-4	EO379923	Ferri Inductor FL7H 8.2 mH(J)	2
17-5	EC250841	Mylar/C. 0.01μF(J) 50WV (Vert. type)	2
17-6	ER380913	Carbon/R. RD1/4 33(J) (Stop. type)	2
17-7	ER211667	Carbon/R. RD1/4 100(J) (Stop. type)	2
17-8	ER350065	Carbon/R. RD1/4 430(J) (Stop. type)	2
17-9	EZ580871	SW. Retaining Parts	1
17-10	VM422381	Slide Plate Shaft	2
17-11	EZ580860	Speed SW. Lever	1
17-12	ZW357164	'E' Ring 2.3M	2
17-13	BA587902	SRT P.C. Board A (TD-5006) Comp. (PRO)	1
17-14	ZS371856	ISO Screw, binding head 3x5	2
17-15	SZ580735	Speed Change Plate	1
		SRT P.C. BOARD A (TD-5006) BLOCK	
17-13	BA587902	SRT P.C. Board A (TD-5006) Comp. (PRO)	1
17-SW1	ES573671	Push SW. 1FST-6U-122-3	1
17-L1	EO369178	Ferri Inductor FL7H 1.5MH(J)	2
		Capacitor, Vertical Type	
17-C1	EC250841	Mylar 0.01μF(J) 50WV	2
17-C2	EC411827	Mylar 0.0082μF(J) 50WV	2
17-C3	EC329861	Mylar 0.027μF(J) 50WV	2
17-C4	EC379214	Mylar 0.047μF(J) 50WV	2
17-C5	EC368335	Mylar 0.022μF(J) 50WV	2
		Resistor, Stopper Type	
17-R1	ER213096	Carbon RD1/4 510(J)	2
17-R2	ER349784	Carbon RD1/4 390(J)	2
17-R3, 4	ER380913	Carbon RD1/4 33(J)	4
17-R5	ER213120	Carbon RD1/4 56(J)	2
17-R6	ER362441	Carbon RD1/4 1.8k(J)	2
17-R7	ER406923	Carbon RD1/4 75(J)	2

FIG. 18 PHOTO OF SPARK QUENCHER P.C. BOARD (A) (TD-2086) BLOCK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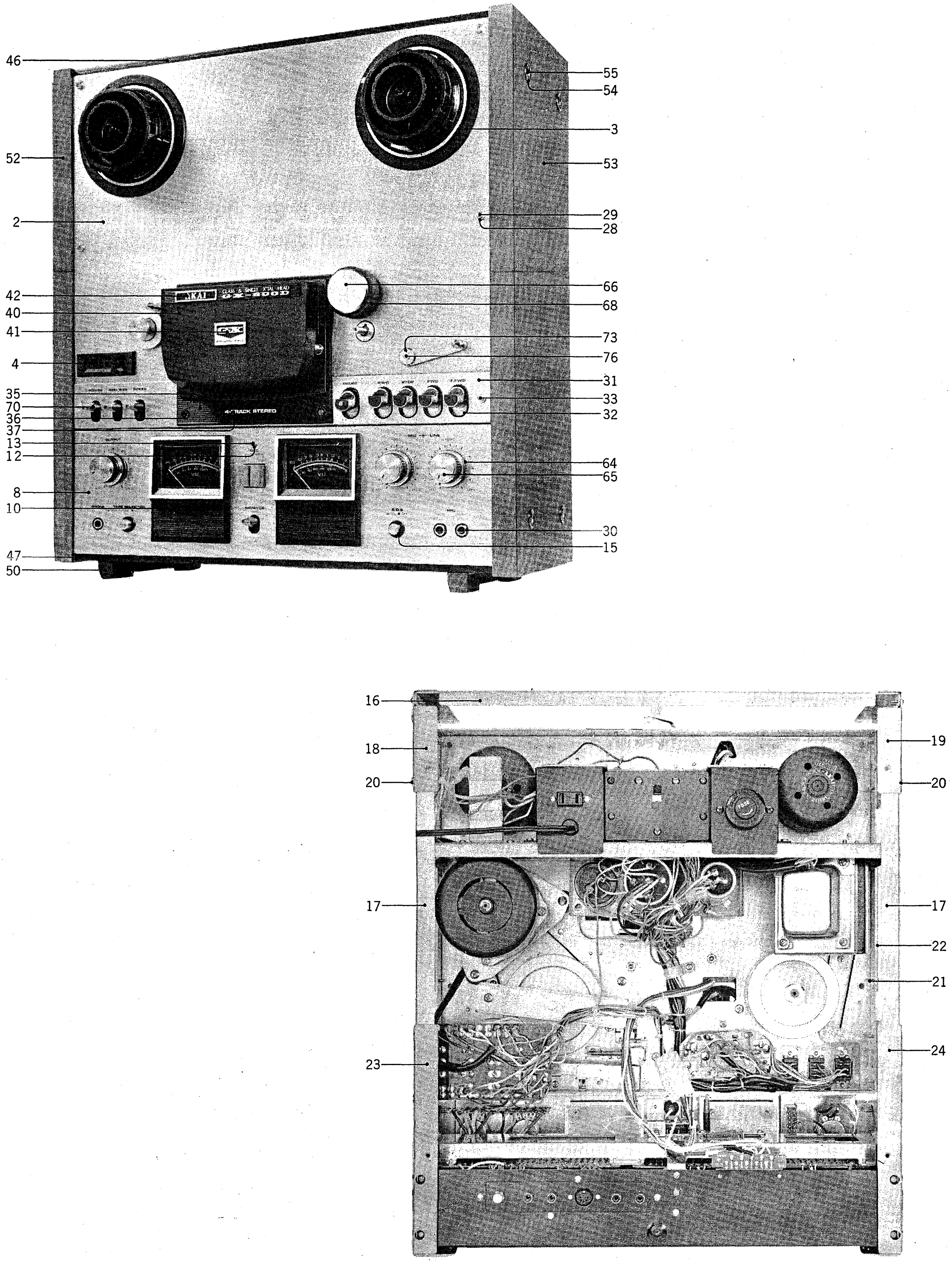
SPARK QUENCHER P.C. BOARD (A) (TD-2086) BLOCK

Symbol No.	Parts No.	Description	Q'ty
18-1x	BA587586	Spark Quencher P.C. Board (A) Comp. (TD-2086)	1
18-CR3to13	ER376435	Spark Quencher U/L 0.1μ+120Ω 250WV	11

FIG. 19 PHOTO OF FINAL ASSEMBLY BLOCK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FINAL ASSEMBLY BLOCK

MECH. PANEL BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
19-1x	BZ587373	Mech. Panel Block Comp.	TD	1
19-2	SP581455	Mech. Panel	TD-6001	1
19-3	SE581602	Reel Table Escutcheon 2	TD-6021	2
19-4	SE528906	Counter Escutcheon	ND-6008	1
19-5x	ZW575730	Speed Nut (P Type) 3M	6-3-6	8

AMP. PANEL BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
19-6x	BZ587384	Amp. Panel Block Comp.	TD-1, 2	1
19-7x	BZ587395	Amp. Panel Block Comp. (DB)	TD-3	1
19-8	SP581422	Amp. Panel A	TD-6004	1
19-9x	SP581512	Amp. Panel B (DB)	TD-6004	1
19-10	SZ473815	VU Meter Cover	KH-6020	2
19-11x	ZS355500	Screw, binding head 2.6x5		6
19-12	SZ457806	Lens Holder	55-5013	1
19-13	EL569878	Lamp Lense A-2 (Red)	55-5011	1
19-14x	ZW405865	Washer (Nylon) D5.2x10.3x0.5t		1
19-15	SE569744	Knob Escutcheon	TD-6017	2

FINAL ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
19-16	SZ529920	Reinforcement Angle A	ND-6003	1
19-17	SZ529086	Reinforcement Angle B	ND-6004	2
19-18	SZ581534	Mech. Side Plate A (Right)	TD-6006	1
19-19	SZ581545	Mech. Side Plate B (Left)	TD-6006	1
19-20	ZS419736	Screw, binding head 4x6		8
19-21	ZS447840	Tapping Screw #2 3x8 (BR)		12
19-22	SZ581040	Panel Support	TD-6012	2
19-23	MZ529931	Mech. Side Plate C (Right)	ND-6002	1
19-24	MZ529942	Mech. Side Plate D (Left)	ND-6002	1
19-25x	SZ581218	Amp, Panel Support A (Right)	TD-6018	1
19-26x	SZ581220	Amp. Panel Support B (Left)	TD-6018	1
19-27x	ZS447772	Tapping Screw #2 3x6 (BR)		6
19-28	ZW408418	Panel Washer	KD-6029	6
19-29	ZS203084	Screw, oval countersunk head 3x8		4
19-30	EZ436217	Collar For Jack	MC-5006	3
19-31	SP581433	Control Panel	TD-6005	1
19-32	SE581038	Operation Button Escutcheon	TD-6007	5
19-33	ZS408690	Screw, oval countersunk head 3x10		2
19-34x	ZS200687	Tapping Screw #2 3x6 (Round)		2
19-35	SC581400	Head Cover Base	TD-6002	1
19-36	ZW421740	Screw, pan head 3x8 (Black)		2
19-37	SM581084	Name Plate (4TR)	TD-6024	1
19-38x	SM581073	Name Plate (2TR)	TD-6023	1
19-39x	SM495977	Name Plate (DB)	KD-A6207	1
19-40	SC581411	Head Cover	TD-6003	1
19-41	SM382285	GX Symbol Plate	RD-A633	1
19-42	SM581062	Name Plate GX-600D	TD-6022	1
19-43x	SM583323	Name Plate (DB)	TD-6031	1
19-44x	ZW527670	Head Cover Retaining Ring	ND-6018	2
19-45x	SZ529874	Head Cover Prop	ND-6014	2
19-46	SP528748	Upper Plate	ND-6022	1
19-47	SP528750	Lower Plate	ND-6022	1
19-48x	SZ483737	Panel Washer B (Black)	KD-6029	4
19-49x	ZS482815	Screw, oval countersunk head 3x8 (Black)		4
19-50	SZ549516	ND Square Foot	ND-6041	2
19-51x	ZS413245	Screw, pan head 4x15		4
19-52	SP527692	Side Plate A (Right)	ND-6021	1
19-53	SP527703	Side Plate B (Left)	ND-6021	1
19-54	ZW548010	Spot Facing Washer	MU-6028	8
19-55	ZS561295	Screw, binding head 4x25		8
19-56x	SP581670	Rear Plate U	ND-6023	1
19-57x	SP581657	Rear Plate A (UL)	ND-6023	1
19-58x	SP581668	Rear Plate E (EC)	ND-6023	1
19-59x	SP581501	Rear Plate J (JPN)	ND-6023	1
19-60x	SA377190	Rubber Foot, LM	LM-404	4
19-61x	ZW419646	Washer (SPC) D4.5x9.8x0.5t		4
19-62x	ZS536444	Screw, binding head 4x18		4
19-63x	ZS498273	Tapping Screw #2 3x8, w/washer		2
19-64	SK549843	Double Knob A, w/rubber ring	TW-6304	3
19-65	SK549876	Double Knob B, w/rubber ring	TW-6307	3
19-66	SK581051	Pinch Roller Cap	TD-6013	1
19-67x	SK534374	Pinch Roller Cap (PRO)	TW-6019	1
19-68	MP582164	Pinch Roller D=42	TD-1034	1
19-69x	MP533744	Pinch Roller TW D=36 (PRO)	TW-1040	1
19-70	SK581837	Amp. Knob 1-B	CP-5018	3
19-71x	EF563681	Fuse 1A 250V	39-1-50	1
19-72x	SZ580735	Speed Change Plate	TD-2073	1
19-73	ZW535094	Decorative Washer	TW-2077	1
19-74x	ZW575785	Washer (Nylon) D6.5x10.3x0.5t		1
19-75x	ZW260010	Washer (PBP) D6.1x10x0.1t		2
19-76	ZS575796	Screw, oval countersunk head 3x5		1
19-77x	SZ581141	Protector Plate (JPN)	TD-1062	1
19-78x	ZS355511	Screw, binding head 3x6		2
19-79x	EF563703	Fuse 2A 250V	39-1-50	1

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BA587924	16-9x
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BA587981	12-1x
BA588003	14-1x
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EZ580860	16-6	ML580364	8-35	MZ580061	10-83	SZ473815	19-10	ZS408690	19-33
EZ580860	17-11	ML580408	7-8	MZ580072	10-89	SZ483737	19-48x	ZS413155	3-27x
EZ580871	11-99	ML580443	6-2	MZ580162	10-86	SZ529086	19-17	ZS413155	5-18
EZ580871	16-4	ML680465	6-24	MZ580206	10-70	SZ529108	2-13	ZS413155	6-31
EZ580871	17-9	ML580555	6-11	MZ580241	8-5	SZ529874	19-45x	ZS413155	8-22
EZ580893	11-84	ML580590	9-36	MZ580320	8-28	SZ529920	19-16	ZS413155	8-45x
EZ580904	11-86x	ML580612	9-38	MZ580375	8-36	SZ535094	6-38	ZS413155	9-14
EZ580915	11-31	ML580702	10-50	MZ580397	7-4	SZ549516	19-50	ZS413155	10-21
EZ580972	11-43x	ML580847	7-13	MZ580410	7-3	SZ580735	11-104	ZS413155	11-95x
EZ580994	11-45x	ML581130	10-60	MZ580500	6-20	SZ580735	16-11	ZS413155	15-9x
EZ581005	11-46x	ML581152	8-2	MZ580577	6-10	SZ580735	17-15	ZS413245	19-51x
EZ581387	11-1	ML581163	8-3	MZ580601	9-37	SZ570735	19-72x	ZS413741	8-37
EZ581398	11-70	ML581174	8-4	MZ580634	5-7	SZ581040	19-22	ZS413741	15-11
EZ581624	15-7	ML581185	8-8	MZ580667	5-14	SZ581141	19-77x	ZS413785	10-52
EZ581635	11-85x	ML581207	9-16	MZ580680	6-33	SZ581218	19-25x	ZS413785	10-99
EZ581804	15-14x	ML581231	9-17x	MZ580724	7-17x	SZ581220	19-26x	ZS416687	4-14
HA533597	1-28	ML581354	8-9	MZ580781	10-3	ZS581534	19-18	ZS416687	5-16
HA533608	1-29	ML581365	8-10	MZ580836	5-13	SZ581545	19-19	ZS416687	9-6
HA583198	9-49x	ML581613	9-26	MZ580858	7-18x	UM387617	6-9x	ZS416687	10-20x
HE563220	1-23	ML581883	10-16	MZ581128	10-72	VM422381	11-100	ZS417137	11-50x
HE587790	1-26x	ML582041	3-22	MZ581196	8-24	VM422381	16-5	ZS417148	6-36
HP536501	1-21	ML582041	10-36	MZ581242	9-7	VM422381	17-10	ZS417148	9-24x
HP552205	1-24x	ML582063	10-37	MZ581275	10-11	ZG317496	3-11	ZS419736	19-20
HR384513	1-22	ML582074	3-28	MZ581286	10-100x	ZG428927	10-8	ZS421740	19-36
HR552216	1-25x	ML582074	10-42	MZ581444	9-1	ZG466312	1-9	ZS424056	2-10
HZ532710	1-8	ML582085	10-71	MZ581466	10-15	ZG520716	11-40	ZS424124	6-27
HZ532732	1-14	ML582096	10-73	MZ581995	3-21	ZG528311	11-35	ZS427026	2-12
HZ532765	1-16	ML582118	10-75	MZ581995	10-30	ZG528423	11-79	ZS427037	2-4
HZ532776	1-18	ML582120	10-78	MZ582028	10-32	ZG528928	8-43	ZS435273	3-20
HZ581106	1-3	ML582175	10-77	MZ582030	10-33	ZG529683	11-83	ZS440291	9-42
HZ581117	1-4	ML583356	10-96	MZ582142	10-45	ZG540090	3-29	ZS447772	11-13
HZ803597	1-5	ML583367	8-47	MZ583424	10-97	ZG540090	10-44	ZS447772	11-29
MB437703	4-19	MP533744	10-67x	MZ586438	4-12	ZG540584	1-17x	ZS447772	11-67
MB527556	10-57	MP533744	19-69x	MZ586798	4-9x	ZG540617	3-15	ZS447772	11-87
MB580138	10-58	MP582164	10-66	MZ596698	5-8	ZG580230	8-14	ZS447772	19-27x
MC573726	10-31	MP582164	19-68	MZ802980	10-7	ZG580252	8-17	ZS447840	15-10
MH244710	4-11	MR540876	2-5	MZ810191	6-26x	ZG580263	8-18	ZS447840	19-21
MH244710	6-7	MR580105	10-55	MZ810191	10-18	ZG580285	8-19	ZS455207	9-25x
MH254182	2-8	MS342000	3-14	SA377190	19-60x	ZG580285	10-87	ZS460438	1-30x
MH257477	10-49	MS580094	10-76	SB581016	11-47x	ZG580432	7-9	ZS462947	11-92x
MH529233	1-12	MS580116	10-54	SB581027	11-48x	ZG58-511	6-13	ZS464692	8-6
MH533913	10-5	MS580184	10-90	SB581578	8-21	ZG580522	6-19	ZS468358	9-48x
MH578957	1-7	MS580353	8-32	SB583244	8-20	ZG580533	6-17	ZS472274	9-8
MH580083	10-88	MS580353	8-38	SC581400	19-35	ZG580746	6-21	ZS472274	9-51
MH580588	6-8	MS580386	5-2	SC581411	19-40	ZG580746	10-82	ZS481645	8-29
MH580691	6-32	MS580454	5-20	SE528906	19-4	ZG580768	10-65	ZS482815	19-49x
MH581253	10-61	MS580454	6-25	SE529457	11-11x	ZG580770	10-64	ZS487912	5-4
MH581894	10-19	MS580487	6-3	SE569744	19-15	ZG580882	11-32	ZS498273	19-63x
MH581905	6-37	MS581310	4-4	SE580983	11-44x	ZG582131	10-79	ZS523664	11-69x
MH581916	4-18	MS581321	4-5x	SE581038	19-32	ZG582232	5-23	ZS533766	10-69
MH581927	10-22	MS581343	8-7	SE581602	19-3	ZG583391	10-91	ZS536444	19-62x
MH581938	10-102	MS582153	10-13	SK528671	11-39	ZG583413	10-98	ZS537006	1-6
MH581940	10-23	MS583380	8-46	SK531224	11-96	ZS200305	5-21	ZS561295	19-55
MH581951	10-24	MT314987	3-25	SK534374	19-67x	ZS200687	19-34x	ZS562432	1-15
MH581962	10-26	MT314987	10-40	SK549843	19-64	ZS201183	11-62x	ZS562432	8-42
MH581973	10-27	MT436860	3-10	SK549876	19-65	ZS203016	2-6	ZS575752	7-10
MH581984	3-30	MT534666	3-12	SK580151	5-22	ZS203084	19-29	ZS575796	6-39
MH581984	10-28	MT534677	3-13	SK581051	19-66	ZS243516	10-63	ZS575796	19-76
MH583345	10-29	MT534688	3-16	SK581332	4-13	ZS272395	2-11	ZS575910	11-64
MH586563	2-9	MT576538	3-9	SK581837	7-20	ZS292667	5-12	ZS589511	9-43
MI292678	5-3	MT577437	3-8x	SK581837	19-70	ZS322728	4-21	ZW259738	10-56
MI296245	4-3	MV248141	5-11	SM382285	19-41	ZS323728	6-23	ZW259773	10-59
ML396933	10-2	MV408510	3-2x	SM495977	19-39x	ZS323728	7-14	ZW259896	10-39x
ML528851	11-73	MV537862	4-15	SM581062	19-42	ZS323728	10-12x	ZW260010	19-75x
ML528873	11-74	MZ248185	3-3	SM581073	19-38x	ZS323728	11-8x	ZW260256	6-6
ML528884	11-75	MZ314605	10-43	SM581084	19-37	ZS325495	10-95	ZW260278	3-4

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Parts No.	Ref. No. & Symbol No.
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ZW270088	11-82
ZW270101	7-7
ZW270101	8-13
ZW270101	11-33
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ZW270134	2-14
ZW270156	3-5
ZW270156	6-12
ZW272722	11-17
ZW273688	11-65x
ZW273745	1-11x
ZW273756	6-15
ZW273756	10-17
ZW273756	11-63x
ZW273756	5-12x
ZW273835	1-10
ZW273881	1-34
ZW273881	9-21x
ZW273914	1-13
ZW280283	3-24
ZW290283	6-34
ZW290283	8-15
ZW290283	10-35
ZW317171	11-81
ZW321592	5-5x
ZW330412	2-15x
ZW330412	4-22
ZW330412	6-30x
ZW330423	2-16x
ZW330423	4-23x
ZW330423	6-29x
ZW330445	2-17x
ZW345442	10-4
ZW357164	11-102
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ZW405865	19-14x
ZW408418	19-28
ZW410051	6-18
ZW413190	4-24x
ZW413190	6-28
ZW413256	1-20
ZW413785	3-17
ZW416698	10-14
ZW416698	10-25x
ZW419646	19-61x
ZW420682	10-74
ZW420682	11-38
ZW421097	7-5
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ZW550642	6-22
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ZW554624	11-18
ZW562476	3-19x
ZW562757	8-16
ZW573546	5-9
ZW575684	5-15
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ZW580173	10-38
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ZW580678	6-14
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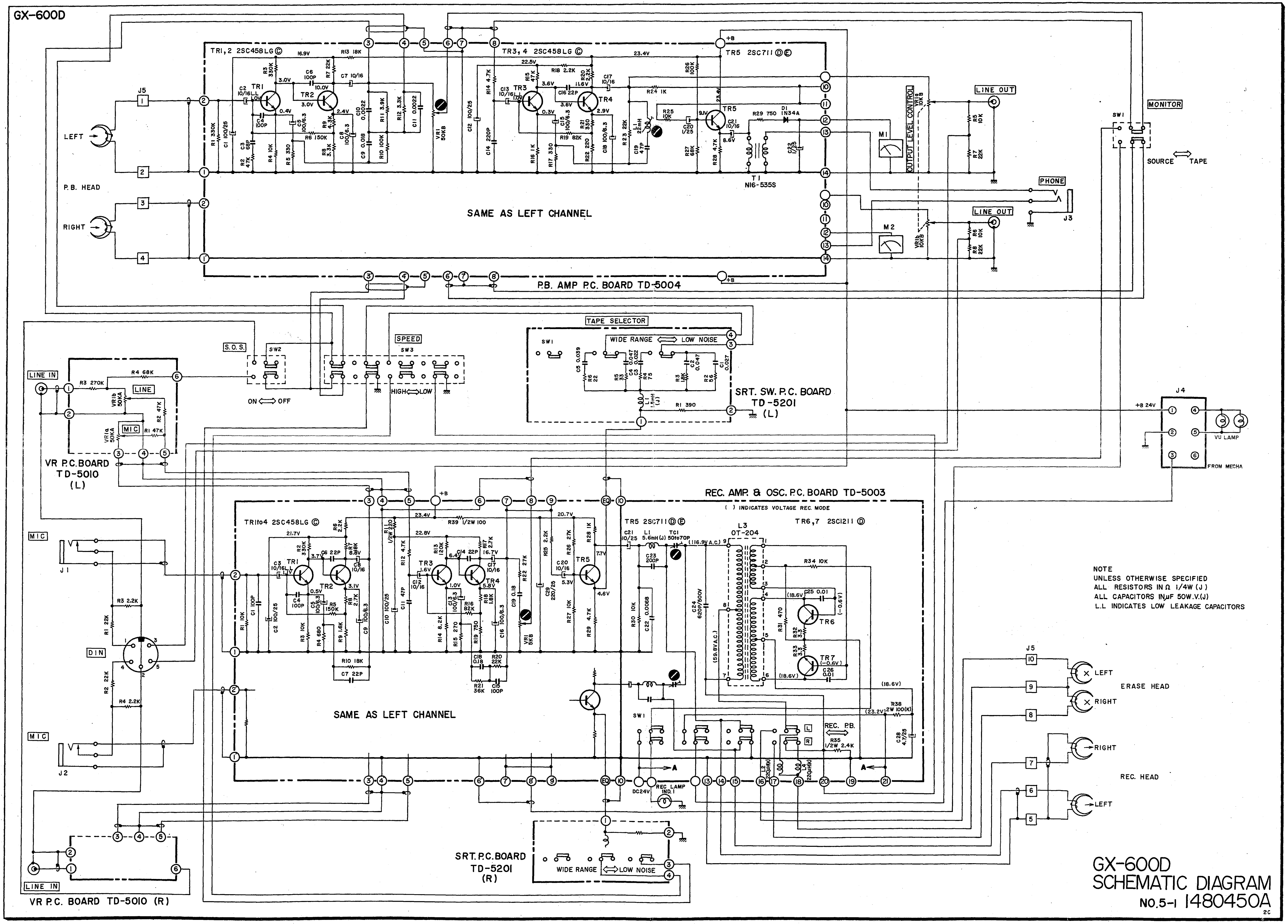
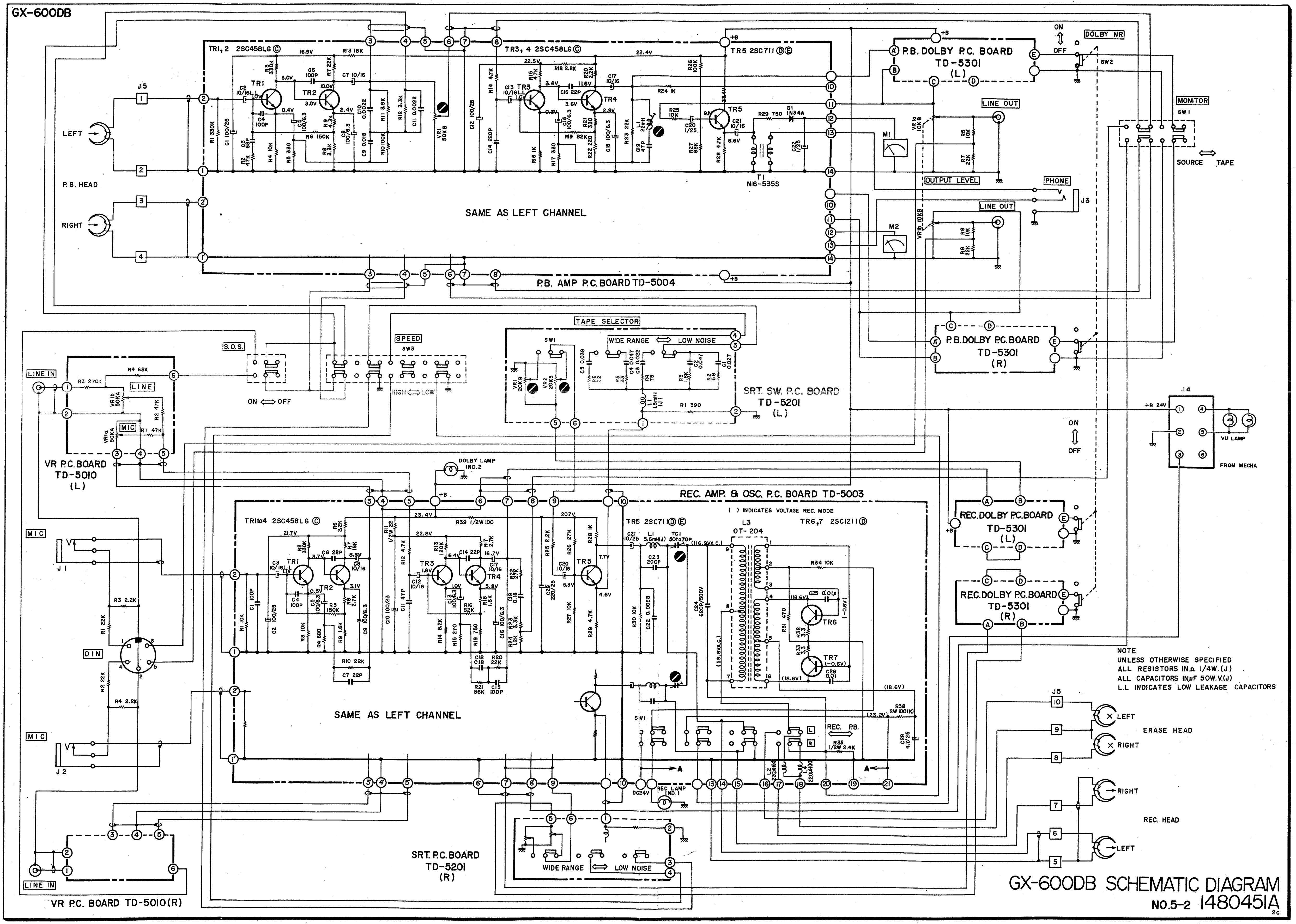
SECTION 3

SCHEMATIC DIAGRAM

1. GX-600D SCHEMATIC DIAGRAM
2. GX-600DB SCHEMATIC DIAGRAM
3. GX-600D · PRO SCHMATIC DIAGRAM
4. GX-600D/DB/PRO SCHEMATIC DIAGRAM


GX-600D
P.B. HEAD
LEFT
RIGHT
J5
TR1, 2 2SC458LG Ⓒ
TR3, 4 2SC458LG Ⓒ
TR5 2SC711 ⒹⒺ
SAME AS LEFT CHANNEL
P.B. AMP P.C. BOARD TD-5004
T1 N16-535S
M1
M2
OUTPUT LEVEL CONTROL
LINE OUT
PHONE
J3
MONITOR
SW1
SOURCE ⟺ TAPE
S.O.S.
SW2
ON ⟺ OFF
SPEED
SW3
HIGH ⟺ LOW
TAPE SELECTOR
WIDE RANGE ⟺ LOW NOISE
SRT. SW. P.C. BOARD TD-5201 (L)
LINE IN
LINE
MIC
VR P.C. BOARD TD-5010 (L)
J4
+B 24V
VU LAMP
FROM MECHA
MIC
J1
DIN
J2
REC. AMP. & OSC. P.C. BOARD TD-5003
( ) INDICATES VOLTAGE REC. MODE
TR1 to 4 2SC458LG Ⓒ
TR5 2SC711 ⒹⒺ
TR6, 7 2SC1211 Ⓓ
L3 OT-204
SAME AS LEFT CHANNEL
REC. ⟺ P.B.
ERASE HEAD
REC. HEAD
DC24V
REC LAMP IND. 1
SRT. P.C. BOARD TD-5201 (R)
VR P.C. BOARD TD-5010 (R)
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W (J)
ALL CAPACITORS IN μF 50W.V.(J)
L.L INDICATES LOW LEAKAGE CAPACITORS
GX-600D
SCHEMATIC DIAGRAM
NO.5-1 1480450A

AKAI-00181/DRUCK3

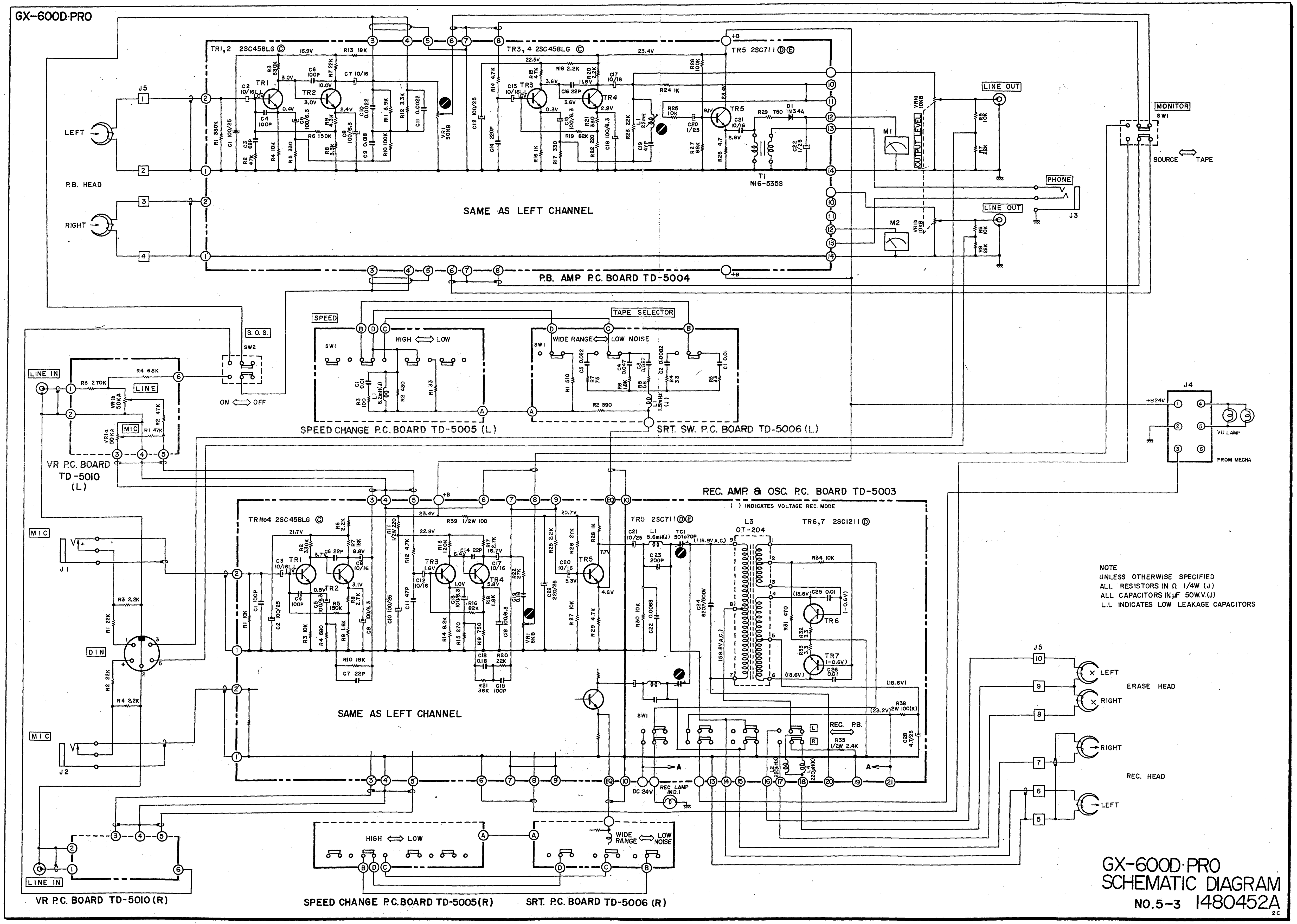

GX-600DB
TR1, 2 2SC458LG Ⓒ
TR3, 4 2SC458LG Ⓒ
TR5 2SC711 ⒹⒺ
J5
LEFT
RIGHT
P. B. HEAD
SAME AS LEFT CHANNEL
P.B. AMP P.C. BOARD TD-5004
T1 N16-535S
VR1 50KB
P.B. DOLBY P.C. BOARD TD-5301 (L)
P.B. DOLBY P.C. BOARD TD-5301 (R)
DOLBY NR
ON ⇕ OFF
SW2
LINE OUT
MONITOR
SW1
SOURCE ⟺ TAPE
M1
M2
OUTPUT LEVEL
PHONE
J3
S.O.S.
ON ⟺ OFF
SPEED
SW3
HIGH ⟺ LOW
TAPE SELECTOR
WIDE RANGE ⟺ LOW NOISE
SRT. SW. P.C. BOARD TD-5201 (L)
LINE IN
LINE
MIC
VR P.C. BOARD TD-5010 (L)
DOLBY LAMP IND. 2
REC. AMP. & OSC. P.C. BOARD TD-5003
( ) INDICATES VOLTAGE REC. MODE
TR1to4 2SC458LG Ⓒ
TR5 2SC711 ⒹⒺ
TR6,7 2SC1211 Ⓓ
L3 OT-204
REC. DOLBY P.C. BOARD TD-5301 (L)
REC. DOLBY P.C. BOARD TD-5301 (R)
J4
+B 24V
VU LAMP
FROM MECHA
J1
J2
DIN
REC. ⟺ PB.
DC24V
REC LAMP IND. 1
SRT. P.C. BOARD TD-5201 (R)
WIDE RANGE ⟺ LOW NOISE
VR P.C. BOARD TD-5010(R)
ERASE HEAD
REC. HEAD

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W.(J)
ALL CAPACITORS IN μF 50W.V.(J)
L.L INDICATES LOW LEAKAGE CAPACITORS

GX-600DB SCHEMATIC DIAGRAM

NO.5-2 148045IA

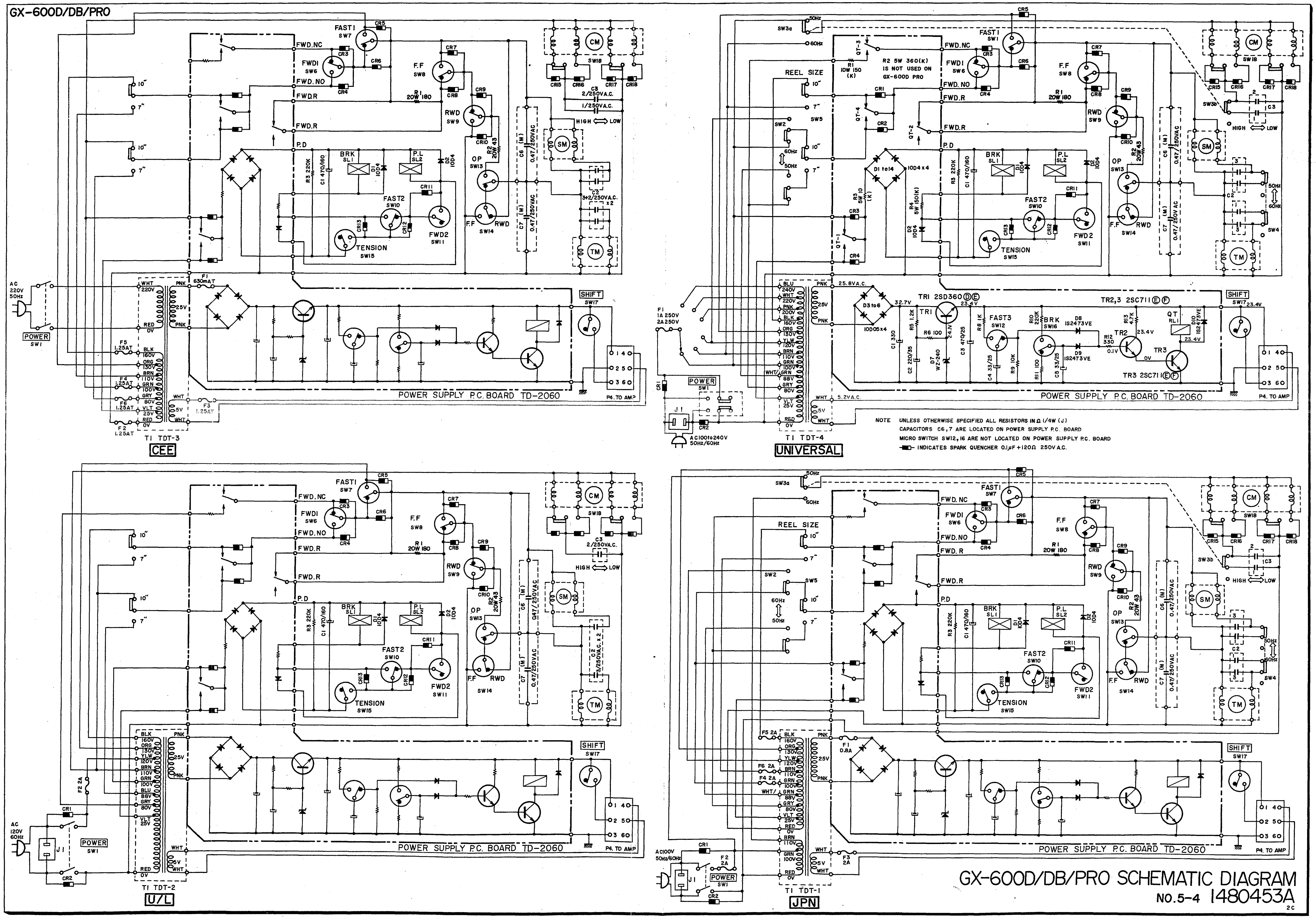
2C


GX-600D·PRO
P.B. HEAD
LEFT
RIGHT
J5
TR1, 2 2SC458LG ©
TR3, 4 2SC458LG ©
TR5 2SC711 Ⓓ Ⓔ
SAME AS LEFT CHANNEL
P.B. AMP P.C. BOARD TD-5004
T1 N16-535S
M1
M2
OUTPUT LEVEL
LINE OUT
MONITOR
SW1
SOURCE ⟺ TAPE
PHONE
J3
S.O.S.
SW2
ON ⟺ OFF
SPEED
HIGH ⟺ LOW
SPEED CHANGE P.C. BOARD TD-5005 (L)
TAPE SELECTOR
WIDE RANGE ⟺ LOW NOISE
SRT. SW. P.C. BOARD TD-5006 (L)
LINE IN
LINE
MIC
VR P.C. BOARD TD-5010 (L)
J4
+B24V
VU LAMP
FROM MECHA
REC. AMP. & OSC. P.C. BOARD TD-5003
( ) INDICATES VOLTAGE REC. MODE
TR1to4 2SC458LG ©
TR5 2SC711 Ⓓ Ⓔ
TR6, 7 2SC1211 Ⓓ
L3 OT-204
TR6
TR7
J1
J2
DIN
SAME AS LEFT CHANNEL
REC. ⟺ P.B.
REC LAMP IND.1
DC 24V
ERASE HEAD
REC. HEAD
LINE IN
VR P.C. BOARD TD-5010 (R)
SPEED CHANGE P.C. BOARD TD-5005 (R)
SRT. P.C. BOARD TD-5006 (R)

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W (J)
ALL CAPACITORS IN µF 50W.V. (J)
L.L INDICATES LOW LEAKAGE CAPACITORS

GX-600D·PRO
SCHEMATIC DIAGRAM
NO.5-3 1480452A
2C

AKAI-00181/DRUCK5



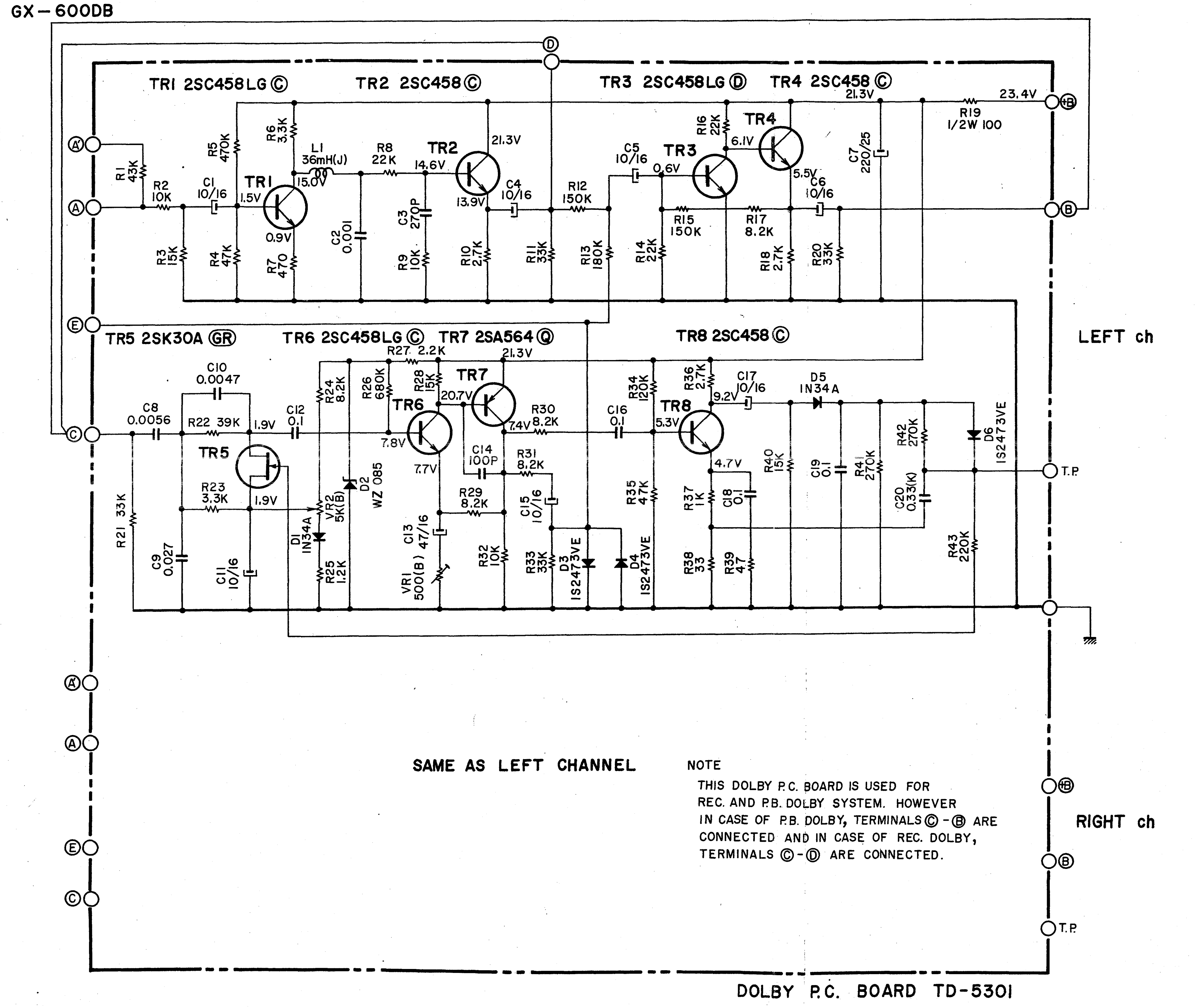
GX-600D/DB/PRO
CEE
UNIVERSAL
U/L
JPN
T1 TDT-3
T1 TDT-4
T1 TDT-2
T1 TDT-1
POWER SUPPLY P.C. BOARD TD-2060
POWER SW1
SHIFT SW17
P4. TO AMP
FAST1 SW7
FWD1 SW6
F.F SW8
RWD SW9
OP SW13
FAST2 SW10
FWD2 SW11
TENSION SW15
SW14
SW18
BRK SL1
P.L SL2
CM
SM
TM
FWD.NC
FWD.NO
FWD.R
P.D
HIGH ⟺ LOW
REEL SIZE
10"
7"
50Hz
60Hz
R1 20W 180
R2 20W 43
R3 220K
C1 470/160
C3 2/250V A.C.
C6 (M) 0.47/250VAC
C7 (M) 0.47/250VAC
AC 220V 50Hz
AC 120V 60Hz
AC100V 50Hz/60Hz
AC100 to 240V 50Hz/60Hz
F1 630mAT
TR1 2SD360 Ⓓ Ⓔ
TR2,3 2SC711 Ⓔ Ⓕ
FAST3 SW12
BRK SW16
R2 5W 360(K) IS NOT USED ON GX-600D PRO
25.8V A.C.
5.2V A.C.

NOTE UNLESS OTHERWISE SPECIFIED ALL RESISTORS IN Ω 1/4W (J)
CAPACITORS C6, 7 ARE LOCATED ON POWER SUPPLY P.C. BOARD
MICRO SWITCH SW12, 16 ARE NOT LOCATED ON POWER SUPPLY P.C. BOARD
-▮▯- INDICATES SPARK QUENCHER 0.1μF + 120Ω 250V A.C.

GX-600D/DB/PRO SCHEMATIC DIAGRAM

NO.5-4 1480453A

2C


GX-600DB
TR1 2SC458LG ©
TR2 2SC458 ©
TR3 2SC458LG Ⓓ
TR4 2SC458 ©
TR5 2SK30A GR
TR6 2SC458LG ©
TR7 2SA564 Q
TR8 2SC458 ©
R1 43K
R2 10K
R3 15K
R4 47K
R5 470K
R6 3.3K
R7 470
L1 36mH(J)
R8 22K
R9 10K
R10 2.7K
R11 33K
R12 150K
R13 180K
R14 22K
R15 150K
R16 22K
R17 8.2K
R18 2.7K
R19 1/2W 100
R20 33K
C1 10/16
C2 0.001
C3 270P
C4 10/16
C5 10/16
C6 10/16
C7 220/25
1.5V
15.0V
0.9V
14.6V
21.3V
13.9V
0.6V
6.1V
5.5V
21.3V
23.4V
C8 0.0056
C10 0.0047
R22 39K
1.9V
C12 0.1
R23 3.3K
1.9V
R21 33K
C9 0.027
C11 10/16
R24 8.2K
R25 1.2K
R26 680K
R27 2.2K
R28 15K
VR2 5K(B)
D1 1N34A
D2 WZ 085
7.8V
7.7V
20.7V
21.3V
7.4V
R30 8.2K
C13 47/16
VR1 500(B)
C14 100P
R29 8.2K
R31 8.2K
C15 10/16
R32 10K
R33 33K
D3 1S2473VE
D4 1S2473VE
C16 0.1
R34 120K
R35 47K
R36 2.7K
9.2V
5.3V
4.7V
C17 10/16
D5 1N34A
R37 1K
C18 0.1
R38 33
R39 47
R40 15K
C19 0.1
R41 270K
R42 270K
C20 0.33(K)
R43 220K
D6 1S2473VE
Ⓐ'
Ⓐ
Ⓔ
Ⓒ
Ⓓ
Ⓑ'
Ⓑ
T.P
LEFT ch
RIGHT ch
SAME AS LEFT CHANNEL
DOLBY P.C. BOARD TD-5301

NOTE

THIS DOLBY P.C. BOARD IS USED FOR REC. AND P.B. DOLBY SYSTEM. HOWEVER IN CASE OF P.B. DOLBY, TERMINALS Ⓒ - Ⓑ ARE CONNECTED AND IN CASE OF REC. DOLBY, TERMINALS Ⓒ - Ⓓ ARE CONNECTED.

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W(J)
ALL CAPACITORS IN μF 50W.V.(J)

GX-600DB
SCHEMATIC DIAGRAM
NO.5-5 1480454A
2C